

Algebra I Lesson #3 Unit 10
Class Worksheet #3
For Worksheets #4 - #6

Algebra I Multiplying Monomials

Algebra I Multiplying Monomials

Monomial:

Algebra I Multiplying Monomials

Monomial: a polynomial

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$$5x$$

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$$5x$$

$$-3y$$

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$$5x$$

$$-3y$$

$$x$$

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$$5x$$

$$-3y$$

$$x$$

$$2$$

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$5x$

$-3y$

x

2

x^4

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$$5x$$

$$-3y$$

$$x$$

$$2$$

$$x^4$$

$$8xy$$

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$5x$

$-3y$

x

2

x^4

$8xy$

$-7ac$

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$5x$ $-3y$ x 2 x^4

$8xy$ $-7ac$ $15x^3$

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$5x$

$-3y$

x

2

x^4

$8xy$

$-7ac$

$15x^3$

-7

Algebra I Multiplying Monomials

Monomial: a polynomial with one term.

Here are some examples.

$5x$

$-3y$

x

2

x^4

$8xy$

$-7ac$

$15x^3$

-7

$12x^3y^2z$

Algebra I Multiplying Monomials

Multiplying Powers of x

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{\hspace{2cm}}$

$$(x^3)(x^4) =$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{\hspace{2cm}}$

$$(x^3)(x^4) = (x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{\hspace{2cm}}$

$$(x^3)(x^4) = (x \cdot x \cdot x)(x \cdot x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{\hspace{2cm}}$

$$(x^3)(x^4) = (x \cdot x \cdot x)(x \cdot x \cdot x \cdot x)$$

$$(x^3)(x^4) =$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{\hspace{2cm}}$

$$(x^3)(x^4) = (x \cdot x \cdot x)(x \cdot x \cdot x \cdot x)$$

$$(x^3)(x^4) = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

$$(x^3)(x^4) = (x \cdot x \cdot x)(x \cdot x \cdot x \cdot x)$$

$$(x^3)(x^4) = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{\hspace{2cm}}$

$(x^2)(x^6) =$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{\hspace{2cm}}$

$(x^2)(x^6) = (x \cdot x)$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{\hspace{2cm}}$

$$(x^2)(x^6) = (x \cdot x)(x \cdot x \cdot x \cdot x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{\hspace{2cm}}$

$$(x^2)(x^6) = (x \cdot x)(x \cdot x \cdot x \cdot x \cdot x \cdot x)$$

$$(x^2)(x^6) =$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{\hspace{2cm}}$

$$(x^2)(x^6) = (x \cdot x)(x \cdot x \cdot x \cdot x \cdot x \cdot x)$$

$$(x^2)(x^6) = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$(x^2)(x^6) = (x \cdot x)(x \cdot x \cdot x \cdot x \cdot x \cdot x)$$

$$(x^2)(x^6) = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{\hspace{2cm}}$

$(x^5)(x^5) =$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{\hspace{2cm}}$

$$(x^5)(x^5) = (x \cdot x \cdot x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{\hspace{2cm}}$

$$(x^5)(x^5) = (x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{\hspace{2cm}}$

$$(x^5)(x^5) = (x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)$$

$$(x^5)(x^5) =$$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{\hspace{2cm}}$$

$$(x^5)(x^5) = (x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)$$

$$(x^5)(x^5) = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$(x^5)(x^5) = (x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)$$

$$(x^5)(x^5) = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x)(x^3) = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x)(x^3) = \underline{\hspace{2cm}}$

$(x^1)(x^3) =$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$4. \quad (x)(x^3) = \underline{\hspace{2cm}}$$

$$(x^1)(x^3) = (x)$$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$4. \quad (x)(x^3) = \underline{\hspace{2cm}}$$

$$(x^1)(x^3) = (x)(x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$4. \quad (x)(x^3) = \underline{\hspace{2cm}}$$

$$(x^1)(x^3) = (x)(x \cdot x \cdot x)$$

$$(x^1)(x^3) =$$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$4. \quad (x)(x^3) = \underline{\hspace{2cm}}$$

$$(x^1)(x^3) = (x)(x \cdot x \cdot x)$$

$$(x^1)(x^3) = x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$4. \quad (x)(x^3) = \underline{x^4}$$

$$(x^1)(x^3) = (x)(x \cdot x \cdot x)$$

$$(x^1)(x^3) = x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$4. \quad (x^1)(x^3) = \underline{x^4}$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$ Rule:

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$4. \quad (x^1)(x^3) = \underline{x^4}$$

Rule: When multiplying two powers of x,

Algebra I Multiplying Monomials

Multiplying Powers of x

$$1. \quad (x^3)(x^4) = \underline{x^7}$$

$$2. \quad (x^2)(x^6) = \underline{x^8}$$

$$3. \quad (x^5)(x^5) = \underline{x^{10}}$$

$$4. \quad (x^1)(x^3) = \underline{x^4}$$

Rule: When multiplying two powers of x, you just add the exponents.

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Rule: When multiplying two powers of x, you just add the exponents.

(x^a)

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Rule: When multiplying two powers of x, you just add the exponents.

$$(x^a)(x^b)$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Rule: When multiplying two powers of x, you just add the exponents.

$$(x^a)(x^b) =$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Rule: When multiplying two powers of x, you just add the exponents.

$$(x^a)(x^b) = x$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Rule: When multiplying two powers of x, you just add the exponents.

$$(x^a)(x^b) = x^{a+b}$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Rule: When multiplying two powers of x, you just add the exponents.

$$(x^a)(x^b) = x^{a+b}$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Rule: When multiplying two powers of x, you just add the exponents.

$$(x^a)(x^b) = x^{(a+b)}$$

Algebra I Multiplying Monomials

Multiplying Powers of x

1. $(x^3)(x^4) = \underline{x^7}$

2. $(x^2)(x^6) = \underline{x^8}$

3. $(x^5)(x^5) = \underline{x^{10}}$

4. $(x^1)(x^3) = \underline{x^4}$

Rule: When multiplying two powers of x, you just add the exponents.

$$(x^a)(x^b) = x^{(a+b)}$$

Algebra I Multiplying Monomials

Consider the following examples.

Algebra I Multiplying Monomials

Consider the following examples.

5. $(3x)(5) = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Consider the following examples.

5. $(3x)(5) = \underline{\hspace{2cm}}$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

5. $(3x)(5) = \underline{\hspace{2cm}}$

$$(3x)(5) =$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

5. $(3x)(5) = \underline{\hspace{2cm}}$

$$(3x)(5) = 3 \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{\hspace{2cm}}$$

$$(3x)(5) = 3 \cdot x \cdot 5$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{\hspace{2cm}}$$

$$(3x)(5) = 3 \cdot x \cdot 5$$

$$(3x)(5) =$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{\hspace{2cm}}$$

$$(3x)(5) = 3 \cdot x \cdot 5$$

$$(3x)(5) = 3 \cdot 5 \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{\mathbf{15}}$$

$$(3x)(5) = 3 \cdot x \cdot 5$$

$$(3x)(5) = 3 \cdot 5 \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$(3x)(5) = 3 \cdot x \cdot 5$$

$$(3x)(5) = 3 \cdot 5 \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

5. $(3x)(5) = \underline{15x}$

Algebra I Multiplying Monomials

Consider the following examples.

5. $(3x)(5) = \underline{15x}$

6. $(2x)(4x) = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Consider the following examples.

5. $(3x)(5) = \underline{15x}$

6. $(2x)(4x) = \underline{\hspace{2cm}}$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{\hspace{2cm}}$$

$$(2x)(4x) =$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{\hspace{2cm}}$$

$$(2x)(4x) = 2 \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{\hspace{2cm}}$$

$$(2x)(4x) = 2 \cdot x \cdot 4 \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{\hspace{2cm}}$$

$$(2x)(4x) = 2 \cdot x \cdot 4 \cdot x$$

$$(2x)(4x) =$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{\hspace{2cm}}$$

$$(2x)(4x) = 2 \cdot x \cdot 4 \cdot x$$

$$(2x)(4x) = 2 \cdot 4$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{\hspace{2cm}}$$

$$(2x)(4x) = 2 \cdot x \cdot 4 \cdot x$$

$$(2x)(4x) = 2 \cdot 4 \cdot x \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8}$$

$$(2x)(4x) = 2 \cdot x \cdot 4 \cdot x$$

$$(2x)(4x) = 2 \cdot 4 \cdot x \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$(2x)(4x) = 2 \cdot x \cdot 4 \cdot x$$

$$(2x)(4x) = 2 \cdot 4 \cdot x \cdot x$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{\hspace{2cm}}$$

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{\hspace{2cm}}$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{\hspace{2cm}}$$

$$(5x^2)(-8x^3) =$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{\hspace{2cm}}$$

$$(5x^2)(-8x^3) = 5 \cdot x^2$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{\hspace{2cm}}$$

$$(5x^2)(-8x^3) = 5 \cdot x^2 \cdot (-8) \cdot x^3$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{\hspace{2cm}}$$

$$(5x^2)(-8x^3) = 5 \cdot x^2 \cdot (-8) \cdot x^3$$

$$(5x^2)(-8x^3) =$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{\hspace{2cm}}$$

$$(5x^2)(-8x^3) = 5 \cdot x^2 \cdot (-8) \cdot x^3$$

$$(5x^2)(-8x^3) = 5 \cdot (-8)$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{\hspace{2cm}}$$

$$(5x^2)(-8x^3) = 5 \cdot x^2 \cdot (-8) \cdot x^3$$

$$(5x^2)(-8x^3) = 5 \cdot (-8) \cdot x^2 \cdot x^3$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

$$7. \quad (5x^2)(-8x^3) = \underline{-40}$$

$$(5x^2)(-8x^3) = 5 \cdot x^2 \cdot (-8) \cdot x^3$$

$$(5x^2)(-8x^3) = 5 \cdot (-8) \cdot x^2 \cdot x^3$$

Just rearrange the factors !!!

Algebra I Multiplying Monomials

Consider the following examples.

$$5. \quad (3x)(5) = \underline{15x}$$

$$6. \quad (2x)(4x) = \underline{8x^2}$$

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$$8. \quad (-8x^2y)(-3xy^2) = \underline{24}$$

$$(-8x^2y)(-3xy^2) = (-8) \cdot x^2 \cdot y \cdot (-3) \cdot x \cdot y^2$$

$$(-8x^2y)(-3xy^2) = (-8) \cdot (-3) \cdot x^2 \cdot x \cdot y \cdot y^2$$

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$$(-8x^2y)(-3xy^2) = (-8) \cdot x^2 \cdot y \cdot (-3) \cdot x \cdot y^2$$

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$$9. \quad (-x^5)(2x^3) = \underline{\hspace{2cm}}$$

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$$(-1x^5)(2x^3) =$$

Just rearrange the factors !!!

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$$9. \quad (-x^5)(2x^3) = \underline{\hspace{2cm}}$$

$$(-1x^5)(2x^3) = (-1) \cdot x^5 \cdot 2 \cdot x^3$$

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$$(-1x^5)(2x^3) = (-1) \cdot 2$$

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$$9. \quad (-x^5)(2x^3) = \underline{\hspace{2cm}}$$

$$(-1x^5)(2x^3) = (-1) \cdot x^5 \cdot 2 \cdot x^3$$

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$$9. \quad (-x^5)(2x^3) = \underline{-2}$$

$$(-1x^5)(2x^3) = (-1) \cdot x^5 \cdot 2 \cdot x^3$$

$$(-1x^5)(2x^3) = (-1) \cdot 2 \cdot x^5 \cdot x^3$$

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$$7. \quad (5x^2)(-8x^3) = \underline{-40x^5}$$

$$8. \quad (-8x^2y)(-3xy^2) = \underline{24x^3y^3}$$

$$9. \quad (-x^5)(2x^3) = \underline{-2x^8}$$

$$(-1x^5)(2x^3) = (-1) \cdot x^5 \cdot 2 \cdot x^3$$

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Algebra I Multiplying Monomials

Algebra I Multiplying Monomials

Powers of Monomials

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\hspace{2cm}}$

$$(x^2)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\hspace{2cm}}$

$$(x^2)^3 = x^2 \cdot x^2 \cdot x^2$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\hspace{2cm}}$

$$(x^2)^3 = x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\hspace{2cm}}$

$$(x^2)^3 = x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^3 = (x \cdot x)(x \cdot x)(x \cdot x)$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\hspace{2cm}}$

$$(x^2)^3 = x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^3 = (x \cdot x)(x \cdot x)(x \cdot x)$$

$$(x^2)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\hspace{2cm}}$

$$(x^2)^3 = x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^3 = (x \cdot x)(x \cdot x)(x \cdot x)$$

$$(x^2)^3 = x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\mathbf{x^6}}$

$$(x^2)^3 = x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^3 = (x \cdot x)(x \cdot x)(x \cdot x)$$

$$(x^2)^3 = x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{\mathbf{x^6}}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{\hspace{2cm}}$

$(x^2)^4 =$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{\hspace{2cm}}$

$$(x^2)^4 = x^2 \cdot x^2 \cdot x^2 \cdot x^2$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{\hspace{2cm}}$

$$(x^2)^4 = x^2 \cdot x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^4 =$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{\hspace{2cm}}$

$$(x^2)^4 = x^2 \cdot x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^4 = (x \cdot x)(x \cdot x)(x \cdot x)(x \cdot x)$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{\hspace{2cm}}$

$$(x^2)^4 = x^2 \cdot x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^4 = (x \cdot x)(x \cdot x)(x \cdot x)(x \cdot x)$$

$$(x^2)^4 =$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{\hspace{2cm}}$

$$(x^2)^4 = x^2 \cdot x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^4 = (x \cdot x)(x \cdot x)(x \cdot x)(x \cdot x)$$

$$(x^2)^4 = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Powers of Monomials

$$1. \quad (x^2)^3 = \underline{x^6}$$

$$2. \quad (x^2)^4 = \underline{x^8}$$

$$(x^2)^4 = x^2 \cdot x^2 \cdot x^2 \cdot x^2$$

$$(x^2)^4 = (x \cdot x)(x \cdot x)(x \cdot x)(x \cdot x)$$

$$(x^2)^4 = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{\hspace{2cm}}$

$(x^3)^3 =$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{\hspace{2cm}}$

$$(x^3)^3 = x^3 \cdot x^3 \cdot x^3$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{\hspace{2cm}}$

$$(x^3)^3 = x^3 \cdot x^3 \cdot x^3$$

$$(x^3)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{\hspace{2cm}}$

$$(x^3)^3 = x^3 \cdot x^3 \cdot x^3$$

$$(x^3)^3 = (x \cdot x \cdot x)(x \cdot x \cdot x)(x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{\hspace{2cm}}$

$$(x^3)^3 = x^3 \cdot x^3 \cdot x^3$$

$$(x^3)^3 = (x \cdot x \cdot x)(x \cdot x \cdot x)(x \cdot x \cdot x)$$

$$(x^3)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{\hspace{2cm}}$

$$(x^3)^3 = x^3 \cdot x^3 \cdot x^3$$

$$(x^3)^3 = (x \cdot x \cdot x)(x \cdot x \cdot x)(x \cdot x \cdot x)$$

$$(x^3)^3 = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Powers of Monomials

$$1. \quad (x^2)^3 = \underline{x^6}$$

$$2. \quad (x^2)^4 = \underline{x^8}$$

$$3. \quad (x^3)^3 = \underline{x^9}$$

$$(x^3)^3 = x^3 \cdot x^3 \cdot x^3$$

$$(x^3)^3 = (x \cdot x \cdot x)(x \cdot x \cdot x)(x \cdot x \cdot x)$$

$$(x^3)^3 = x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

$(x^5)^6 =$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

$$(x^5)^6 = x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

$$(x^5)^6 = x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5$$

$$(x^5)^6 =$$

Algebra I Multiplying Monomials

Powers of Monomials

$$1. \quad (x^2)^3 = \underline{x^6}$$

$$2. \quad (x^2)^4 = \underline{x^8}$$

$$3. \quad (x^3)^3 = \underline{x^9}$$

$$4. \quad (x^5)^6 = \underline{\hspace{2cm}}$$

$$(x^5)^6 = x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5$$

$$(x^5)^6 = (x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Powers of Monomials

$$1. (x^2)^3 = \underline{x^6}$$

$$2. (x^2)^4 = \underline{x^8}$$

$$3. (x^3)^3 = \underline{x^9}$$

$$4. (x^5)^6 = \underline{\hspace{2cm}}$$

$$(x^5)^6 = x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5$$

$$(x^5)^6 = (x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)$$

We have a problem !!!

Algebra I Multiplying Monomials

Powers of Monomials

$$1. \quad (x^2)^3 = \underline{x^6}$$

$$2. \quad (x^2)^4 = \underline{x^8}$$

$$3. \quad (x^3)^3 = \underline{x^9}$$

$$4. \quad (x^5)^6 = \underline{\hspace{2cm}}$$

$$(x^5)^6 = x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5 \cdot x^5$$

$$(x^5)^6 = (x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)(x \cdot x \cdot x \cdot x \cdot x)$$

We need a rule !!!

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

Rule:

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

Rule: When a power of x

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

Rule: When a power of x is raised to another power,

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

Rule: When a power of x is raised to another power, you just multiply the exponents.

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

Rule: When a power of x is raised to another power, you just multiply the exponents.

$$(x^a)^b =$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{\hspace{2cm}}$

Rule: When a power of x is raised to another power, you just multiply the exponents.

$$(x^a)^b = x^{ab}$$

Algebra I Multiplying Monomials

Powers of Monomials

1. $(x^2)^3 = \underline{x^6}$

2. $(x^2)^4 = \underline{x^8}$

3. $(x^3)^3 = \underline{x^9}$

4. $(x^5)^6 = \underline{x^{30}}$

Rule: When a power of x is raised to another power, you just multiply the exponents.

$$(x^a)^b = x^{ab}$$

Algebra I Multiplying Monomials

Powers of Monomials

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 =$$

Rearrange the factors !!!

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

Rearrange the factors !!!

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Notice that every **factor** inside the parenthesis

Take another look.


Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$


Notice that every **factor** inside the parenthesis

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

↑↑

Notice that every **factor** inside the parenthesis

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

↑↑

Notice that every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Take another look.

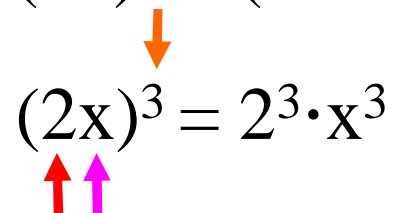
Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$


Notice that every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 =$$

Notice that every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2$$

↑ ↑

Notice that every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3$$

Notice that every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Notice that every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x$$

↑ ↑

Notice that every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Notice that every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Take another look.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\hspace{2cm}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{\mathbf{8}}$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{\mathbf{8x^3}}$$

$$(2x)^3 = (2x)(2x)(2x)$$

$$(2x)^3 = (2 \cdot 2 \cdot 2)(x \cdot x \cdot x)$$

$$(2x)^3 = 2^3 \cdot x^3$$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{8x^3}$

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{8x^3}$

6. $(5x)^2 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{\mathbf{8x^3}}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 =$$

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 =$$

Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 =$$

↑ ↑

Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 =$$

↑ ↑

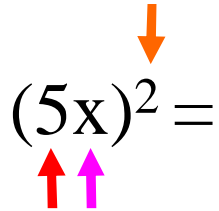
Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 =$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 =$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 = 5$$

↑ ↑


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{\mathbf{8x^3}}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 = 5^2$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 = 5^2 \cdot$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 = 5^2 \cdot x$$

↑ ↑


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 = 5^2 \cdot x^2$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{\hspace{2cm}}$$

$$(5x)^2 = 5^2 \cdot x^2$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25}$$

$$(5x)^2 = 5^2 \cdot x^2$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$(5x)^2 = 5^2 \cdot x^2$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{\mathbf{8x^3}}$$

$$6. \quad (5x)^2 = \underline{\mathbf{25x^2}}$$

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{\mathbf{8x^3}}$$

$$6. \quad (5x)^2 = \underline{\mathbf{25x^2}}$$

$$7. \quad (3xy)^4 = \underline{\hspace{2cm}}$$

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{\mathbf{8x^3}}$$

$$6. \quad (5x)^2 = \underline{\mathbf{25x^2}}$$

$$7. \quad (3xy)^4 = \underline{\hspace{2cm}}$$

$$(3xy)^4 =$$

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{\hspace{2cm}}$$

$$(3xy)^4 =$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.


Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{\hspace{2cm}}$$

$$(3xy)^4 = 3$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.


Algebra I Multiplying Monomials

Powers of Monomials

$$5. (2x)^3 = \underline{8x^3}$$

$$6. (5x)^2 = \underline{25x^2}$$

$$7. (3xy)^4 = \underline{\hspace{2cm}}$$

$$(3xy)^4 = 3^4$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81}$$

$$(3xy)^4 = 3^4$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81}$$

$$(3xy)^4 = 3^4.$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.


Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81}$$

$$(3xy)^4 = 3^4 \cdot x$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{\mathbf{8x^3}}$$

$$6. \quad (5x)^2 = \underline{\mathbf{25x^2}}$$

$$7. \quad (3xy)^4 = \underline{\mathbf{81}}$$

$$(3xy)^4 = 3^4 \cdot x^4$$

↓ ↓

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81x^4}$$

$$(3xy)^4 = 3^4 \cdot x^4$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81x^4}$$

$$(3xy)^4 = 3^4 \cdot x^4 \cdot y^4$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.


Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81x^4}$$

$$(3xy)^4 = 3^4 \cdot x^4 \cdot y$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.


Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81x^4}$$

$$(3xy)^4 = 3^4 \cdot x^4 \cdot y^4$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81x^4y^4}$$

$$(3xy)^4 = 3^4 \cdot x^4 \cdot y^4$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81x^4y^4}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{8x^3}$ Rule:

6. $(5x)^2 = \underline{25x^2}$

7. $(3xy)^4 = \underline{81x^4y^4}$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$\text{Rule: } (\mathbf{ab})^n =$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81x^4y^4}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{8x^3}$ Rule: $(ab)^n = a^n b^n$

6. $(5x)^2 = \underline{25x^2}$

7. $(3xy)^4 = \underline{81x^4y^4}$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

5. $(2x)^3 = \underline{8x^3}$ Rule: $(ab)^n = a^n \cdot b^n$.

6. $(5x)^2 = \underline{25x^2}$

7. $(3xy)^4 = \underline{81x^4y^4}$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$5. \quad (2x)^3 = \underline{8x^3}$$

$$\text{Rule: } (ab)^n = a^n \cdot b^n$$

$$6. \quad (5x)^2 = \underline{25x^2}$$

$$7. \quad (3xy)^4 = \underline{81x^4y^4}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$

$$(2x^3)^4 =$$

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$


$$(2x^3)^4 =$$

Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$


$(2x^3)^4 =$


Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$


$(2x^3)^4 =$


Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$

$(2x^3)^4 =$


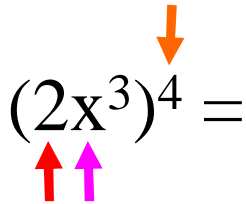
Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$

$(2x^3)^4 =$



Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$

$$(2x^3)^4 =$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$

$$\begin{array}{c} \uparrow \qquad \uparrow \\ (2x^3)^4 = 2 \end{array}$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\hspace{2cm}}$

$(2x^3)^4 = 2^4$



Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\mathbf{16}}$

$$(2x^3)^4 = 2^4$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\mathbf{16}}$


$$(2x^3)^4 = 2^4.$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials


$$8. \quad (2x^3)^4 = \underline{\mathbf{16}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16}}$$
$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\mathbf{16}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\mathbf{16}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

When a power of x is raised to another power,

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\mathbf{16}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

When a power of x is raised to another power, you just multiply the exponents.

Every factor inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{16x^{12}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

When a power of x is raised to another power, you just multiply the exponents.

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{16x^{12}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

9. $(3xy^2)^3 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{\mathbf{16x^{12}}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

9. $(3xy^2)^3 = \underline{\hspace{2cm}}$

$$(3xy^2)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{16x^{12}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\hspace{2cm}}$$

$$(3xy^2)^3 =$$

Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\hspace{2cm}}$$

$$(3xy^2)^3 =$$



Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\hspace{2cm}}$$

$$(3xy^2)^3 =$$



Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{16x^{12}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\hspace{2cm}}$$

$$(3xy^2)^3 =$$



Every **factor** inside the parenthesis

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{16x^{12}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\hspace{2cm}}$$

$$(3xy^2)^3 =$$



Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{16x^{12}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

9. $(3xy^2)^3 = \underline{\hspace{2cm}}$

$$(3xy^2)^3 =$$

↑ ↑ ↑
↓

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\hspace{2cm}}$$

$$(3xy^2)^3 =$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\hspace{2cm}}$$

$$(3xy^2)^3 = 3$$



Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

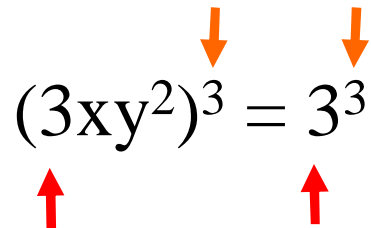
Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{16x^{12}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\hspace{2cm}}$$

$$(3xy^2)^3 = 3^3$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

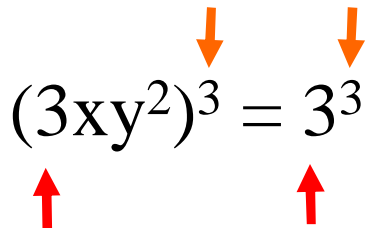
Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\mathbf{27}} \underline{\hspace{1cm}}$$

$$(3xy^2)^3 = 3^3$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\mathbf{27}}$$

$$(3xy^2)^3 = 3^3.$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\mathbf{27x^3y^6}}$$

$$(3xy^2)^3 = 3^3 \cdot x^3 \cdot y^6$$



Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

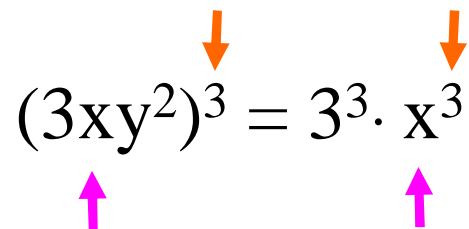
Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{\mathbf{16x^{12}}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{\mathbf{27}} \underline{\hspace{1cm}}$$

$$(3xy^2)^3 = 3^3 \cdot x^3$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

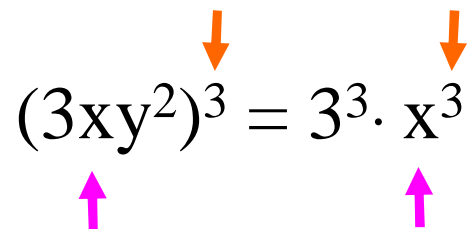
Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{16x^{12}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

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$$(3xy^2)^3 = 3^3 \cdot x^3$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

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$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

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Algebra I Multiplying Monomials

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$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

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$$(3xy^2)^3 = 3^3 \cdot x^3 \cdot (y^2)^3$$



Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

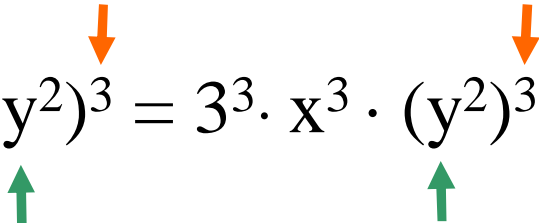
Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{16x^{12}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

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Algebra I Multiplying Monomials

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$$8. \quad (2x^3)^4 = \underline{16x^{12}}$$

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Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{16x^{12}}$

When a power of y

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

9. $(3xy^2)^3 = \underline{27x^3}$

$$(3xy^2)^3 = 3^3 \cdot x^3 \cdot (y^2)^3$$

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{16x^{12}}$

When a power of y

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

9. $(3xy^2)^3 = \underline{27x^3}$

$$(3xy^2)^3 = 3^3 \cdot x^3 \cdot (y^2)^3$$



Algebra I Multiplying Monomials

Powers of Monomials

$$8. \quad (2x^3)^4 = \underline{16x^{12}}$$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

$$9. \quad (3xy^2)^3 = \underline{27x^3y^6}$$

$$(3xy^2)^3 = 3^3 \cdot x^3 \cdot (y^2)^3$$



When a power of y is raised to another power,

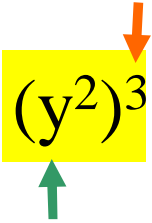
Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{16x^{12}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

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When a power of y is raised to another power,

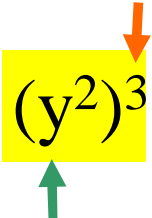
Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{16x^{12}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

9. $(3xy^2)^3 = \underline{27x^3y^6}$

$$(3xy^2)^3 = 3^3 \cdot x^3 \cdot (y^2)^3$$


When a power of y is raised to another power, you just multiply the exponents.

Algebra I Multiplying Monomials

Powers of Monomials

8. $(2x^3)^4 = \underline{16x^{12}}$

$$(2x^3)^4 = 2^4 \cdot (x^3)^4$$

9. $(3xy^2)^3 = \underline{27x^3y^6}$

$$(3xy^2)^3 = 3^3 \cdot x^3 \cdot (y^2)^3$$

When a power of y is raised to another power, you just multiply the exponents.

Algebra I Multiplying Monomials

Powers of Monomials

10. $(-5x^3y^4)^2 = \underline{\hspace{2cm}}$

Algebra I Multiplying Monomials

Powers of Monomials

10. $(-5x^3y^4)^2 = \underline{\hspace{2cm}}$

$$(-5x^3y^4)^2 =$$

Algebra I Multiplying Monomials

Powers of Monomials

10. $(-5x^3y^4)^2 = \underline{\hspace{2cm}}$

$$(-5x^3y^4)^2 =$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

10. $(-5x^3y^4)^2 = \underline{\hspace{2cm}}$

$$\begin{array}{ccc} (-5x^3y^4)^2 = (-5) \\ \uparrow \qquad \qquad \uparrow \end{array}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. \quad (-5x^3y^4)^2 = \underline{\mathbf{25}}$$

$$\begin{array}{ccc} & \downarrow & \downarrow \\ (-5x^3y^4)^2 & = & (-5)^2 \\ \uparrow & & \uparrow \end{array}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

10. $(-5x^3y^4)^2 = \underline{\mathbf{25}}$

$$(-5x^3y^4)^2 = (-5)^2 \cdot$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25}}$$

$$\begin{array}{c} \downarrow \qquad \qquad \downarrow \\ (-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \\ \uparrow \qquad \qquad \uparrow \end{array}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. \quad (-5x^3y^4)^2 = \underline{\mathbf{25x^6}}$$

$$\begin{array}{c} \downarrow \qquad \qquad \downarrow \\ (-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \\ \uparrow \qquad \qquad \uparrow \end{array}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. \quad (-5x^3y^4)^2 = \underline{\mathbf{25x^6}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

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$$10. \quad (-5x^3y^4)^2 = \underline{\mathbf{25x^6}}$$

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Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. \quad (-5x^3y^4)^2 = \underline{\underline{25x^6y^8}}$$

$$\begin{array}{c} \downarrow \qquad \qquad \downarrow \\ (-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2 \\ \uparrow \qquad \qquad \qquad \uparrow \end{array}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. \quad (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\hspace{2cm}}$$

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\hspace{2cm}}$$

$$(-2x^2y^5)^3 =$$

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{25x^6y^8}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\hspace{2cm}}$$

$$(-2x^2y^5)^3 =$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\hspace{2cm}}$$

$$(-2x^2y^5)^3 = (-2)$$



Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\mathbf{-8}}$$

$$\begin{array}{ccc} & \downarrow & \downarrow \\ (-2x^2y^5)^3 & = & (-2)^3 \\ \uparrow & & \uparrow \end{array}$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\mathbf{-8}}$$

$$(-2x^2y^5)^3 = (-2)^3 \cdot$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\mathbf{-8}}$$

$$(-2x^2y^5)^3 = (-2)^3 \cdot (x^2)^3$$



Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

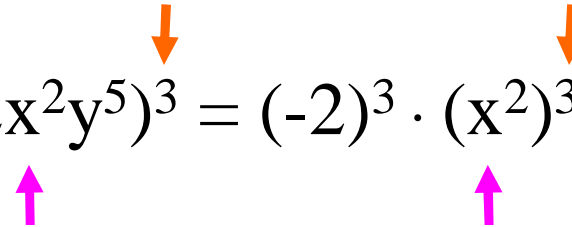
Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\mathbf{-8}}$$

$$(-2x^2y^5)^3 = (-2)^3 \cdot (x^2)^3$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

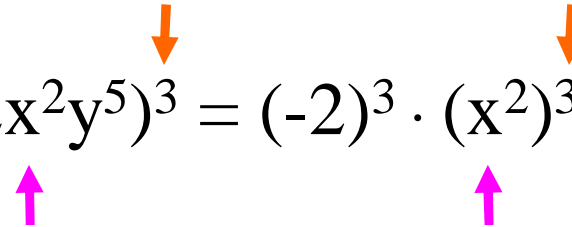
Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\mathbf{-8x^6}}$$

$$(-2x^2y^5)^3 = (-2)^3 \cdot (x^2)^3$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\mathbf{-8x^6}}$$

$$(-2x^2y^5)^3 = (-2)^3 \cdot (x^2)^3 \cdot (y^5)^3$$

Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

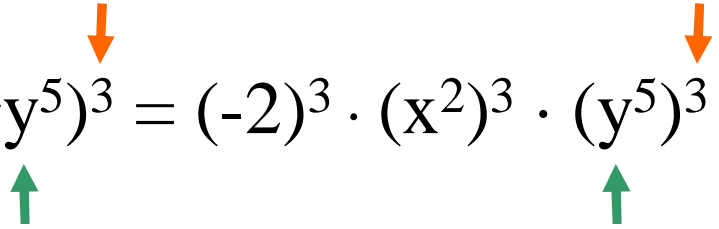
Algebra I Multiplying Monomials

Powers of Monomials

$$10. (-5x^3y^4)^2 = \underline{\mathbf{25x^6y^8}}$$

$$(-5x^3y^4)^2 = (-5)^2 \cdot (x^3)^2 \cdot (y^4)^2$$

$$11. (-2x^2y^5)^3 = \underline{\mathbf{-8x^6}}$$

$$(-2x^2y^5)^3 = (-2)^3 \cdot (x^2)^3 \cdot (y^5)^3$$


Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

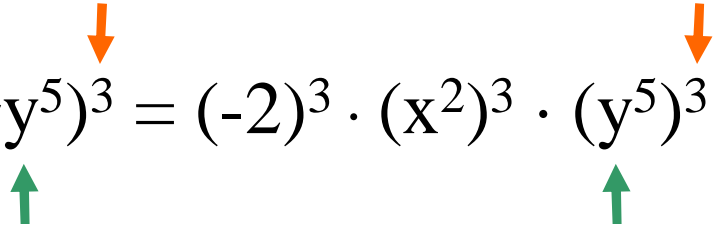
Algebra I Multiplying Monomials

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Every **factor** inside the parenthesis is raised to the power of the exponent **outside** the parenthesis.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{\hspace{2cm}}$

2. $(5x)(7x^5) = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{\hspace{2cm}}$

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{\hspace{2cm}}$

2. $(5x)(7x^5) = \underline{\hspace{2cm}}$

Rule: When multiplying two powers of a variable, you just add the exponents. $(x^a)(x^b) = x^{(a+b)}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{\hspace{2cm}}$

Rule: When multiplying two powers of a variable, you just add the exponents. $(x^a)(x^b) = x^{(a+b)}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{\hspace{2cm}}$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{\hspace{2cm}}$

$= (5 \cdot x)(7 \cdot x^5)$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{\hspace{2cm}}$

$= (5 \cdot x)(7 \cdot x^5) = (5 \cdot 7)(x \cdot x^5)$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{\hspace{2cm}}$

$= (5 \cdot x)(7 \cdot x^5) = (5 \cdot 7)(x \cdot x^5)$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{35}$

$= (5 \cdot x)(7 \cdot x^5) = (5 \cdot 7)(x \cdot x^5)$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{35}$

$= (5 \cdot x)(7 \cdot x^5) = (5 \cdot 7)(x \cdot x^5)$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{35}$

$= (5 \cdot x)(7 \cdot x^5) = (5 \cdot 7)(x^1 \cdot x^5)$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{35}$

$= (5 \cdot x)(7 \cdot x^5) = (5 \cdot 7)(x^1 \cdot x^5)$

Rule: When multiplying two powers of a variable, you just add the exponents. $(x^a)(x^b) = x^{(a+b)}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

1. $(x^4)(x^5) = \underline{x^9}$

2. $(5x)(7x^5) = \underline{35x^6}$

$= (5 \cdot x)(7 \cdot x^5) = (5 \cdot 7)(x^1 \cdot x^5)$

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{\hspace{2cm}}$

4. $(-x^3)(5x^3) = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{\hspace{2cm}}$

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{\hspace{2cm}}$

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Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$3. \quad (-5x^3)(-4x^2) = \underline{\hspace{2cm}}$$

$$= (-5 \cdot x^3)(-4 \cdot x^2)$$

$$4. \quad (-x^3)(5x^3) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{\hspace{2cm}}$

$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$

4. $(-x^3)(5x^3) = \underline{\hspace{2cm}}$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$3. \quad (-5x^3)(-4x^2) = \underline{\hspace{2cm}}$$

$$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$$

$$4. \quad (-x^3)(5x^3) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$3. \quad (-5x^3)(-4x^2) = \underline{20}$$

$$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$$

$$4. \quad (-x^3)(5x^3) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{20}$

$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$

4. $(-x^3)(5x^3) = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{20}$

$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$

4. $(-x^3)(5x^3) = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{20}$

$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$

4. $(-x^3)(5x^3) = \underline{\hspace{2cm}}$

Rule: When multiplying two powers of a variable, you just add the exponents. $(x^a)(x^b) = x^{(a+b)}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{20x^5}$

$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$

4. $(-x^3)(5x^3) = \underline{\hspace{2cm}}$

Rule: When multiplying two powers of a variable, you just add the exponents. $(x^a)(x^b) = x^{(a+b)}$

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Simplify each of the following.

3. $(-5x^3)(-4x^2) = \underline{20x^5}$

$$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$$

4. $(-x^3)(5x^3) = \underline{\hspace{2cm}}$

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Simplify each of the following.

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Simplify each of the following.

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Simplify each of the following.

$$3. \quad (-5x^3)(-4x^2) = \underline{20x^5}$$

$$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$$

$$4. \quad (-x^3)(5x^3) = \underline{\hspace{2cm}}$$

$$= (-1 \cdot x^3)(5 \cdot x^3)$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$3. \quad (-5x^3)(-4x^2) = \underline{20x^5}$$

$$= (-5 \cdot x^3)(-4 \cdot x^2) = (-5)(-4)(x^3 \cdot x^2)$$

$$4. \quad (-x^3)(5x^3) = \underline{\hspace{2cm}}$$

$$= (-1 \cdot x^3)(5 \cdot x^3) = (-1)(5)(x^3 \cdot x^3)$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$3. \quad (-5x^3)(-4x^2) = \underline{20x^5}$$

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Algebra I Class Worksheet #3 Unit 10

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$$3. \quad (-5x^3)(-4x^2) = \underline{20x^5}$$

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$$= (-1 \cdot x^3)(5 \cdot x^3) = (-1)(5)(x^3 \cdot x^3)$$

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$3. \quad (-5x^3)(-4x^2) = \underline{20x^5}$$

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$$4. \quad (-x^3)(5x^3) = \underline{-5x^6}$$

$$= (-1 \cdot x^3)(5 \cdot x^3) = (-1)(5)(x^3 \cdot x^3)$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

5. $(9x)(6x) = \underline{\hspace{2cm}}$

6. $(x^2)(-x^2) = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

5. $(9x)(6x) = \underline{\hspace{2cm}}$

6. $(x^2)(-x^2) = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

5. $(9x)(6x) = \underline{\hspace{2cm}}$

6. $(x^2)(-x^2) = \underline{\hspace{2cm}}$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

5. $(9x)(6x) = \underline{\hspace{2cm}}$

$= (9 \cdot x)(6 \cdot x)$

6. $(x^2)(-x^2) = \underline{\hspace{2cm}}$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{\hspace{2cm}} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$6. \quad (x^2)(-x^2) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{\hspace{2cm}} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$6. \quad (x^2)(-x^2) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$5. \quad (9x)(6x) = \underline{54}$$
$$= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x)$$

$$6. \quad (x^2)(-x^2) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$5. \quad (9x)(6x) = \underline{54}$$
$$= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x)$$

$$6. \quad (x^2)(-x^2) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$5. \quad (9x)(6x) = \underline{54x^2}$$
$$= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x)$$

$$6. \quad (x^2)(-x^2) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$6. \quad (x^2)(-x^2) = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$6. \quad (x^2)(-x^2) = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$5. \quad (9x)(6x) = \underline{54x^2}$$
$$= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x)$$

$$6. \quad (x^2)(-x^2) = \underline{\hspace{2cm}}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$\begin{aligned} 6. \quad (x^2)(-x^2) &= \underline{\hspace{2cm}} \\ &= (1 \cdot x^2)(-1 \cdot x^2) \end{aligned}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$\begin{aligned} 6. \quad (x^2)(-x^2) &= \underline{\hspace{2cm}} \\ &= (1 \cdot x^2)(-1 \cdot x^2) = (1)(-1)(x^2 \cdot x^2) \end{aligned}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$\begin{aligned} 6. \quad (x^2)(-x^2) &= \underline{\hspace{2cm}} \\ &= (1 \cdot x^2)(-1 \cdot x^2) = (1)(-1)(x^2 \cdot x^2) \end{aligned}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$\begin{aligned} 6. \quad (x^2)(-x^2) &= \underline{-1} \\ &= (1 \cdot x^2)(-1 \cdot x^2) = (1)(-1)(x^2 \cdot x^2) \end{aligned}$$

Rule: When multiplying two monomials, you can rearrange the factors.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$\begin{aligned} 6. \quad (x^2)(-x^2) &= \underline{-1} \\ &= (1 \cdot x^2)(-1 \cdot x^2) = (1)(-1)(x^2 \cdot x^2) \end{aligned}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$\begin{aligned} 6. \quad (x^2)(-x^2) &= \underline{-1} \\ &= (1 \cdot x^2)(-1 \cdot x^2) = (1)(-1)(x^2 \cdot x^2) \end{aligned}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$5. \quad (9x)(6x) = \underline{54x^2}$$

$$= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x)$$

$$6. \quad (x^2)(-x^2) = \underline{-1}$$

$$= (1 \cdot x^2)(-1 \cdot x^2) = (1)(-1)(x^2 \cdot x^2)$$

Rule: When multiplying two powers of a variable, you just add the exponents. $(x^a)(x^b) = x^{(a+b)}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 5. \quad (9x)(6x) &= \underline{54x^2} \\ &= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x) \end{aligned}$$

$$\begin{aligned} 6. \quad (x^2)(-x^2) &= \underline{-1x^4} \\ &= (1 \cdot x^2)(-1 \cdot x^2) = (1)(-1)(x^2 \cdot x^2) \end{aligned}$$

Rule: When multiplying two powers of a variable, you just add the exponents. $(x^a)(x^b) = x^{(a+b)}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

5. $(9x)(6x) = \underline{54x^2}$

$$= (9 \cdot x)(6 \cdot x) = (9 \cdot 6)(x \cdot x)$$

6. $(x^2)(-x^2) = \underline{-x^4}$

$$= (1 \cdot x^2)(-1 \cdot x^2) = (1)(-1)(x^2 \cdot x^2)$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

7. $(x^4)^5 =$ _____

8. $(x^2)^6 =$ _____

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

7. $(x^4)^5 = \underline{\hspace{2cm}}$

8. $(x^2)^6 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

7. $(x^4)^5 = \underline{\hspace{2cm}}$

8. $(x^2)^6 = \underline{\hspace{2cm}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

7. $(x^4)^5 = \underline{x^{20}}$

8. $(x^2)^6 = \underline{\hspace{2cm}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

7. $(x^4)^5 = \underline{x^{20}}$

8. $(x^2)^6 = \underline{\hspace{2cm}}$

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Simplify each of the following.

7. $(x^4)^5 = \underline{x^{20}}$

8. $(x^2)^6 = \underline{\hspace{2cm}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

7. $(x^4)^5 = \underline{x^{20}}$

8. $(x^2)^6 = \underline{x^{12}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

7. $(x^4)^5 = \underline{x^{20}}$

8. $(x^2)^6 = \underline{x^{12}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{\hspace{2cm}}$

10. $(x^5)^2 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{\hspace{2cm}}$

10. $(x^5)^2 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{\hspace{2cm}}$

10. $(x^5)^2 = \underline{\hspace{2cm}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{x^9}$

10. $(x^5)^2 = \underline{\hspace{2cm}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{x^9}$

10. $(x^5)^2 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{x^9}$

10. $(x^5)^2 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{x^9}$

10. $(x^5)^2 = \underline{\hspace{2cm}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{x^9}$

10. $(x^5)^2 = \underline{x^{10}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

9. $(x^3)^3 = \underline{x^9}$

10. $(x^5)^2 = \underline{x^{10}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

11. $(5x)^2 = \underline{\hspace{2cm}}$

12. $(3x)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

11. $(5x)^2 = \underline{\hspace{2cm}}$

12. $(3x)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

11. $(5x)^2 = \underline{\hspace{2cm}}$

12. $(3x)^3 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 11. \quad (5x)^2 &= \underline{\hspace{2cm}} \\ &= 5^2 \cdot x^2 \end{aligned}$$

$$12. \quad (3x)^3 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 11. \quad (5x)^2 &= \underline{25x^2} \\ &= 5^2 \cdot x^2 \end{aligned}$$

$$12. \quad (3x)^3 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 11. \quad (5x)^2 &= \underline{25x^2} \\ &= 5^2 \cdot x^2 \end{aligned}$$

$$12. \quad (3x)^3 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 11. \quad (5x)^2 &= \underline{25x^2} \\ &= 5^2 \cdot x^2 \end{aligned}$$

$$12. \quad (3x)^3 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 11. \quad (5x)^2 &= \underline{25x^2} \\ &= 5^2 \cdot x^2 \end{aligned}$$

$$12. \quad (3x)^3 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 11. \quad (5x)^2 &= \underline{25x^2} \\ &= 5^2 \cdot x^2 \end{aligned}$$

$$\begin{aligned} 12. \quad (3x)^3 &= \underline{\hspace{2cm}} \\ &= 3^3 \cdot x^3 \end{aligned}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 11. \quad (5x)^2 &= \underline{25x^2} \\ &= 5^2 \cdot x^2 \end{aligned}$$

$$\begin{aligned} 12. \quad (3x)^3 &= \underline{27x^3} \\ &= 3^3 \cdot x^3 \end{aligned}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 11. \quad (5x)^2 &= \underline{25x^2} \\ &= 5^2 \cdot x^2 \end{aligned}$$

$$\begin{aligned} 12. \quad (3x)^3 &= \underline{27x^3} \\ &= 3^3 \cdot x^3 \end{aligned}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

13. $(-4x)^3 = \underline{\hspace{2cm}}$

14. $(-3x)^4 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

13. $(-4x)^3 = \underline{\hspace{2cm}}$

14. $(-3x)^4 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

13. $(-4x)^3 = \underline{\hspace{2cm}}$

14. $(-3x)^4 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 13. \quad (-4x)^3 &= \underline{\hspace{2cm}} \\ &= (-4)^3 \cdot x^3 \end{aligned}$$

$$14. \quad (-3x)^4 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 13. \quad (-4x)^3 &= \underline{-64x^3} \\ &= (-4)^3 \cdot x^3 \end{aligned}$$

$$14. \quad (-3x)^4 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

13. $(-4x)^3 = \underline{-64x^3}$

$$= (-4)^3 \cdot x^3$$

14. $(-3x)^4 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 13. \quad (-4x)^3 &= \underline{-64x^3} \\ &= (-4)^3 \cdot x^3 \end{aligned}$$

$$14. \quad (-3x)^4 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 13. \quad (-4x)^3 &= \underline{-64x^3} \\ &= (-4)^3 \cdot x^3 \end{aligned}$$

$$14. \quad (-3x)^4 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 13. \quad (-4x)^3 &= \underline{-64x^3} \\ &= (-4)^3 \cdot x^3 \end{aligned}$$

$$\begin{aligned} 14. \quad (-3x)^4 &= \underline{\hspace{2cm}} \\ &= (-3)^4 \cdot x^4 \end{aligned}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 13. \quad (-4x)^3 &= \underline{-64x^3} \\ &= (-4)^3 \cdot x^3 \end{aligned}$$

$$\begin{aligned} 14. \quad (-3x)^4 &= \underline{81x^4} \\ &= (-3)^4 \cdot x^4 \end{aligned}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$13. \quad (-4x)^3 = \underline{-64x^3}$$

$$= (-4)^3 \cdot x^3$$

$$14. \quad (-3x)^4 = \underline{81x^4}$$

$$= (-3)^4 \cdot x^4$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

15. $(-x)^5 =$ _____

16. $(-x)^8 =$ _____

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

15. $(-x)^5 = \underline{\hspace{2cm}}$

16. $(-x)^8 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

15. $(-x)^5 = \underline{\hspace{2cm}}$

$= (-1 \cdot x)^5$

16. $(-x)^8 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

15. $(-x)^5 = \underline{\hspace{2cm}}$

$= (-1 \cdot x)^5$

16. $(-x)^8 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

15. $(-x)^5 = \underline{\hspace{2cm}}$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

16. $(-x)^8 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$15. \quad (-x)^5 = \underline{-1x^5}$$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

$$16. \quad (-x)^8 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

15. $(-x)^5 = \underline{-x^5}$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

16. $(-x)^8 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

15. $(-x)^5 = \underline{-x^5}$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

16. $(-x)^8 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$15. \quad (-x)^5 = \underline{-x^5}$$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

$$16. \quad (-x)^8 = \underline{\hspace{2cm}}$$

$$= (-1 \cdot x)^8$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$15. \quad (-x)^5 = \underline{-x^5}$$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

$$16. \quad (-x)^8 = \underline{\hspace{2cm}}$$

$$= (-1 \cdot x)^8$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$15. \quad (-x)^5 = \underline{-x^5}$$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

$$16. \quad (-x)^8 = \underline{\hspace{2cm}}$$

$$= (-1 \cdot x)^8 = (-1)^8 \cdot x^8$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$15. \quad (-x)^5 = \underline{-x^5}$$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

$$16. \quad (-x)^8 = \underline{1x^8}$$

$$= (-1 \cdot x)^8 = (-1)^8 \cdot x^8$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$15. \quad (-x)^5 = \underline{-x^5}$$

$$= (-1 \cdot x)^5 = (-1)^5 \cdot x^5$$

$$16. \quad (-x)^8 = \underline{x^8}$$

$$= (-1 \cdot x)^8 = (-1)^8 \cdot x^8$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

17. $(5x^5)^2 =$ _____

18. $(2x^3)^5 =$ _____

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

17. $(5x^5)^2 = \underline{\hspace{2cm}}$

18. $(2x^3)^5 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

17. $(5x^5)^2 = \underline{\hspace{2cm}}$

18. $(2x^3)^5 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{\hspace{2cm}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{\hspace{2cm}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

17. $(5x^5)^2 = \underline{\hspace{2cm}}$

$= 5^2 \cdot (x^5)^2$

18. $(2x^3)^5 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$
$$= 2^5 \cdot (x^3)^5$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$
$$= 2^5 \cdot (x^3)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{\hspace{2cm}}$$
$$= 2^5 \cdot (x^3)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{32}$$
$$= 2^5 \cdot (x^3)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{32}$$
$$= 2^5 \cdot (x^3)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{32}$$
$$= 2^5 \cdot (x^3)^5$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{32x^{15}}$$
$$= 2^5 \cdot (x^3)^5$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$17. \quad (5x^5)^2 = \underline{25x^{10}}$$
$$= 5^2 \cdot (x^5)^2$$

$$18. \quad (2x^3)^5 = \underline{32x^{15}}$$
$$= 2^5 \cdot (x^3)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 =$ _____

20. $(5x^3yz^2)^3 =$ _____

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{\hspace{2cm}}$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{\hspace{2cm}}$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{\hspace{2cm}}$

$$= (-3)^3 \cdot (x^2)^3$$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{\hspace{2cm}}$

$$= (-3)^3 \cdot (x^2)^3$$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{\hspace{2cm}}$

$= (-3)^3 \cdot (x^2)^3$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{-27}$

$= (-3)^3 \cdot (x^2)^3$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{-27}$

$= (-3)^3 \cdot (x^2)^3$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{-27}$

$$= (-3)^3 \cdot (x^2)^3$$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{-27x^6}$

$= (-3)^3 \cdot (x^2)^3$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{-27x^6}$

$$= (-3)^3 \cdot (x^2)^3$$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

19. $(-3x^2)^3 = \underline{-27x^6}$

$$= (-3)^3 \cdot (x^2)^3$$

20. $(5x^3yz^2)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 19. \quad (-3x^2)^3 &= \underline{-27x^6} \\ &= (-3)^3 \cdot (x^2)^3 \end{aligned}$$

$$20. \quad (5x^3yz^2)^3 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 19. \quad (-3x^2)^3 &= \underline{-27x^6} \\ &= (-3)^3 \cdot (x^2)^3 \end{aligned}$$

$$\begin{aligned} 20. \quad (5x^3yz^2)^3 &= \underline{\hspace{2cm}} \\ &= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3 \end{aligned}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 19. \quad (-3x^2)^3 &= \underline{-27x^6} \\ &= (-3)^3 \cdot (x^2)^3 \end{aligned}$$

$$\begin{aligned} 20. \quad (5x^3yz^2)^3 &= \underline{\hspace{2cm}} \\ &= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3 \end{aligned}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$19. \quad (-3x^2)^3 = \underline{-27x^6}$$

$$= (-3)^3 \cdot (x^2)^3$$

$$20. \quad (5x^3yz^2)^3 = \underline{\hspace{2cm}}$$

$$= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$19. \quad (-3x^2)^3 = \underline{-27x^6}$$
$$= (-3)^3 \cdot (x^2)^3$$

$$20. \quad (5x^3yz^2)^3 = \underline{125}$$
$$= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 19. \quad (-3x^2)^3 &= \underline{-27x^6} \\ &= (-3)^3 \cdot (x^2)^3 \end{aligned}$$

$$\begin{aligned} 20. \quad (5x^3yz^2)^3 &= \underline{125} \\ &= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3 \end{aligned}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$19. \quad (-3x^2)^3 = \underline{-27x^6}$$
$$= (-3)^3 \cdot (x^2)^3$$

$$20. \quad (5x^3yz^2)^3 = \underline{125}$$
$$= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$19. \quad (-3x^2)^3 = \underline{-27x^6}$$
$$= (-3)^3 \cdot (x^2)^3$$

$$20. \quad (5x^3yz^2)^3 = \underline{125x^9}$$
$$= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$19. \quad (-3x^2)^3 = \underline{-27x^6}$$
$$= (-3)^3 \cdot (x^2)^3$$

$$20. \quad (5x^3yz^2)^3 = \underline{125x^9}$$
$$= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 19. \quad (-3x^2)^3 &= \underline{-27x^6} \\ &= (-3)^3 \cdot (x^2)^3 \end{aligned}$$

$$\begin{aligned} 20. \quad (5x^3yz^2)^3 &= \underline{125x^9y^3z^6} \\ &= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3 \end{aligned}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$19. \quad (-3x^2)^3 = \underline{-27x^6}$$
$$= (-3)^3 \cdot (x^2)^3$$

$$20. \quad (5x^3yz^2)^3 = \underline{125x^9y^3z^6}$$
$$= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 19. \quad (-3x^2)^3 &= \underline{-27x^6} \\ &= (-3)^3 \cdot (x^2)^3 \end{aligned}$$

$$\begin{aligned} 20. \quad (5x^3yz^2)^3 &= \underline{125x^9y^3z^6} \\ &= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3 \end{aligned}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 19. \quad (-3x^2)^3 &= \underline{-27x^6} \\ &= (-3)^3 \cdot (x^2)^3 \end{aligned}$$

$$\begin{aligned} 20. \quad (5x^3yz^2)^3 &= \underline{125x^9y^3z^6} \\ &= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3 \end{aligned}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$19. \quad (-3x^2)^3 = \underline{-27x^6}$$

$$= (-3)^3 \cdot (x^2)^3$$

$$20. \quad (5x^3yz^2)^3 = \underline{125x^9y^3z^6}$$

$$= 5^3 \cdot (x^3)^3 \cdot y^3 \cdot (z^2)^3$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

21. $(-2x^3y^2)^4 =$ _____

22. $(-xy^3z^2)^5 =$ _____

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

21. $(-2x^3y^2)^4 = \underline{\hspace{2cm}}$

22. $(-xy^3z^2)^5 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

21. $(-2x^3y^2)^4 = \underline{\hspace{2cm}}$

22. $(-xy^3z^2)^5 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

21. $(-2x^3y^2)^4 = \underline{\hspace{2cm}}$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

22. $(-xy^3z^2)^5 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

21. $(-2x^3y^2)^4 = \underline{\hspace{2cm}}$

$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$

22. $(-xy^3z^2)^5 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

21. $(-2x^3y^2)^4 = \underline{\hspace{2cm}}$

$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$

22. $(-xy^3z^2)^5 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16x^{12}}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16x^{12}}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16x^{12}y^8}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

21. $(-2x^3y^2)^4 = \underline{16x^{12}y^8}$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

22. $(-xy^3z^2)^5 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

21. $(-2x^3y^2)^4 = \underline{16x^{12}y^8}$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

22. $(-xy^3z^2)^5 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 21. \quad (-2x^3y^2)^4 &= \underline{16x^{12}y^8} \\ &= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4 \end{aligned}$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 21. \quad (-2x^3y^2)^4 &= \underline{16x^{12}y^8} \\ &= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4 \end{aligned}$$

$$\begin{aligned} 22. \quad (-xy^3z^2)^5 &= \underline{\hspace{2cm}} \\ &= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5 \end{aligned}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16x^{12}y^8}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

$$= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16x^{12}y^8}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{\hspace{2cm}}$$

$$= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 21. \quad (-2x^3y^2)^4 &= \underline{16x^{12}y^8} \\ &= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4 \end{aligned}$$

$$\begin{aligned} 22. \quad (-xy^3z^2)^5 &= \underline{-1} \\ &= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5 \end{aligned}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 21. \quad (-2x^3y^2)^4 &= \underline{16x^{12}y^8} \\ &= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4 \end{aligned}$$

$$\begin{aligned} 22. \quad (-xy^3z^2)^5 &= \underline{-1} \\ &= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5 \end{aligned}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16x^{12}y^8}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{-1x^5}$$

$$= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16x^{12}y^8}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{-1x^5}$$

$$= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 21. \quad (-2x^3y^2)^4 &= \underline{16x^{12}y^8} \\ &= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4 \end{aligned}$$

$$\begin{aligned} 22. \quad (-xy^3z^2)^5 &= \underline{-1x^5} \\ &= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5 \end{aligned}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 21. \quad (-2x^3y^2)^4 &= \underline{16x^{12}y^8} \\ &= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4 \end{aligned}$$

$$\begin{aligned} 22. \quad (-xy^3z^2)^5 &= \underline{-1x^5y^{15}} \\ &= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5 \end{aligned}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 21. \quad (-2x^3y^2)^4 &= \underline{16x^{12}y^8} \\ &= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4 \end{aligned}$$

$$\begin{aligned} 22. \quad (-xy^3z^2)^5 &= \underline{-1x^5y^{15}} \\ &= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5 \end{aligned}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 21. \quad (-2x^3y^2)^4 &= \underline{16x^{12}y^8} \\ &= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4 \end{aligned}$$

$$\begin{aligned} 22. \quad (-xy^3z^2)^5 &= \underline{-1x^5y^{15}z^{10}} \\ &= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5 \end{aligned}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$21. \quad (-2x^3y^2)^4 = \underline{16x^{12}y^8}$$

$$= (-2)^4 \cdot (x^3)^4 \cdot (y^2)^4$$

$$22. \quad (-xy^3z^2)^5 = \underline{-x^5y^{15}z^{10}}$$

$$= (-1)^5 \cdot x^5 \cdot (y^3)^5 \cdot (z^2)^5$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{\hspace{2cm}}$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{\hspace{2cm}}$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 23. \quad -(-2x)^6 &= \underline{\hspace{2cm}} \\ &= -1 \cdot (-2x)^6 \end{aligned}$$

$$24. \quad -(-3x^4)^3 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{\hspace{2cm}}$

$= -1 \cdot (-2x)^6$



Do this first.

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{\hspace{2cm}}$

$= -1 \cdot (-2x)^6$



Do this first.

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{\hspace{2cm}}$

$= -1 \cdot (-2x)^6 =$

$= -1 \cdot (-2)^6 \cdot x^6$

Do this first.

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$23. \quad -(-2x)^6 = \underline{-64x^6}$$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

$$24. \quad -(-3x^4)^3 = \underline{\hspace{2cm}}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3$$



Do this first.

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3$$



Do this first.

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3$$

Do this first.

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1 \cdot (-27)$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1 \cdot (-27)$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1 \cdot (-27)$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1 \cdot (-27) \cdot x^{12}$$

Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{\hspace{2cm}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1 \cdot (-27) \cdot x^{12}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{27x^{12}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1 \cdot (-27) \cdot x^{12}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

23. $-(-2x)^6 = \underline{-64x^6}$

$$= -1 \cdot (-2x)^6 =$$

$$= -1 \cdot (-2)^6 \cdot x^6 =$$

$$= -1 \cdot 64 \cdot x^6$$

24. $-(-3x^4)^3 = \underline{27x^{12}}$

$$= -1 \cdot (-3x^4)^3 =$$

$$= -1 \cdot (-3)^3 \cdot (x^4)^3 =$$

$$= -1 \cdot (-27) \cdot x^{12}$$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

25. $(2x^3y)^3(3x^3y^5)^2 = \underline{\hspace{2cm}}$

26. $(-5x^3)(-4x)^2 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

25. $(2x^3y)^3(3x^3y^5)^2 = \underline{\hspace{2cm}}$

26. $(-5x^3)(-4x)^2 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

25. $(2x^3y)^3(3x^3y^5)^2 = \underline{\hspace{2cm}}$

26. $(-5x^3)(-4x)^2 = \underline{\hspace{2cm}}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

25. $(2x^3y)^3(3x^3y^5)^2 = \underline{\hspace{2cm}}$

26. $(-5x^3)(-4x)^2 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

25. $(2x^3y)^3(3x^3y^5)^2 = \underline{\hspace{2cm}}$
 $= [2^3 \cdot (x^3)^3 \cdot y^3]$

26. $(-5x^3)(-4x)^2 = \underline{\hspace{2cm}}$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$25. \quad (2x^3y)^3(3x^3y^5)^2 = \underline{\hspace{2cm}}$$
$$= [2^3 \cdot (x^3)^3 \cdot y^3].$$

$$26. \quad (-5x^3)(-4x)^2 = \underline{\hspace{2cm}}$$

Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 25. \quad (2x^3y)^3(3x^3y^5)^2 &= \underline{\hspace{2cm}} \\ &= [2^3 \cdot (x^3)^3 \cdot y^3] \cdot [3^2 \cdot (x^3)^2 \cdot (y^5)^2] = \end{aligned}$$

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$25. \quad (2x^3y)^3(3x^3y^5)^2 = \underline{72}$$

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$$= [8x^9y^3] \cdot [9x^6y^{10}] =$$

$$= (8 \cdot 9)(x^9 \cdot x^6)(y^3 \cdot y^{10}) =$$

$$26. \quad (-5x^3)(-4x)^2 = \underline{-80x^5}$$

$$= [-5x^3] \cdot [(-4)^2 \cdot x^2] =$$

$$= [-5x^3] \cdot [16x^2] =$$

$$= [(-5) \cdot (16)] [x^3 \cdot x^2] =$$

Rule: When multiplying two powers of a variable, you just add the exponents. $(x^a)(x^b) = x^{(a+b)}$

Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

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Every factor inside the parenthesis is raised to the power of the exponent outside the parenthesis. $(ab)^n = a^n b^n$

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Rule: When multiplying two monomials, you can rearrange the factors.

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

$$\begin{aligned} 27. \quad & (-x^3y^2)^4(-x^4y^3)^3 = \underline{-1x^{24}} \\ & = [(-1)^4 \cdot (x^3)^4 \cdot (y^2)^4] \cdot [(-1)^3 \cdot (x^4)^3 \cdot (y^3)^3] = \\ & = [1x^{12}y^8] \cdot [-1x^{12}y^9] = \\ & = (1)(-1)(x^{12} \cdot x^{12})(y^8 \cdot y^9) = \end{aligned}$$

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Algebra I Class Worksheet #3 Unit 10

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Rule: When a power of a variable is raised to another power, you just multiply the exponents. $(x^a)^b = x^{ab}$

Algebra I Class Worksheet #3 Unit 10

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Algebra I Class Worksheet #3 Unit 10

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Algebra I Class Worksheet #3 Unit 10

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Algebra I Class Worksheet #3 Unit 10

Simplify each of the following.

29. $-6^2 = \underline{\hspace{2cm}}$

30. $(-6)^2 = \underline{\hspace{2cm}}$

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$$29. \quad -6^2 = \underline{-36}$$

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Good luck on your homework !!

