Algebra II
Lesson #3 Unit 9
Class Worksheet #3
For Worksheets #3 & #4

Algebra 2 Class Worksheet #3 Unit 9

1. **Find 4 arithmetic means between 7 and 22.**

Algebra 2 Class Worksheet #3 Unit 9

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What does this mean?

Algebra 2 Class Worksheet #3 Unit 9

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Consider an arithmetic sequence containing the numbers 7 and 22 with four numbers in between them.

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.

7, ____, ____, ____, ____, 22

What does this mean?

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Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.

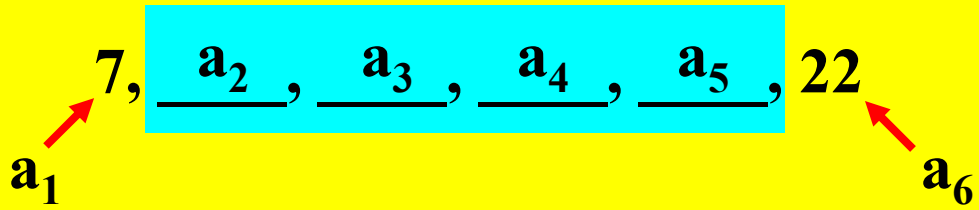
7, ____, ____, ____, ____, 22

What does this mean?

Consider an arithmetic sequence containing the numbers 7 and 22 with four numbers in between them. These numbers are called <u>the 4 arithmetic means between 7 and 22</u>.

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.



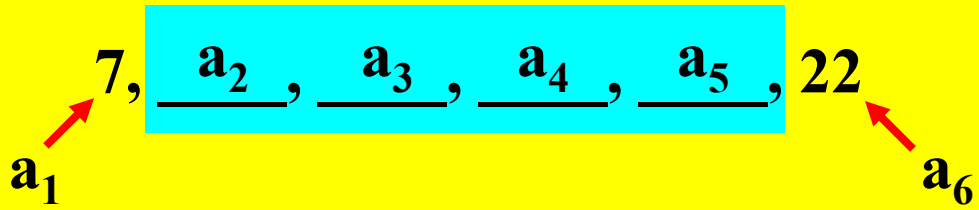
What does this mean?

Consider an arithmetic sequence containing the numbers 7 and 22 with four numbers in between them. These numbers are called the 4 arithmetic means between 7 and 22.

Let $a_1 = 7$ and $a_6 = 22$.

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.



What does this mean?

Consider an arithmetic sequence containing the numbers 7 and 22 with four numbers in between them. These numbers are called the 4 arithmetic means between 7 and 22.

Let $a_1 = 7$ and $a_6 = 22$. The challenge is to find d, the common difference between the terms.

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.

$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_2 a_3 a_4 a_5 a_6

What does this mean?

Consider an arithmetic sequence containing the numbers 7 and 22 with four numbers in between them. These numbers are called <u>the 4 arithmetic means between 7 and 22</u>.

Let $a_1 = 7$ and $a_6 = 22$. The challenge is to find d, the common difference between the terms. Then, we can find the terms we are looking for.

Algebra 2 Class Worksheet #3 Unit 9

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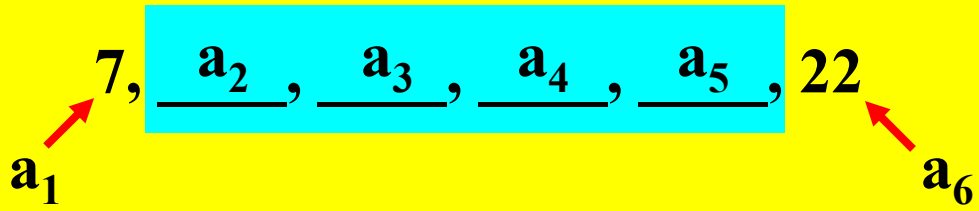

Algebra 2 Class Worksheet #3 Unit 9

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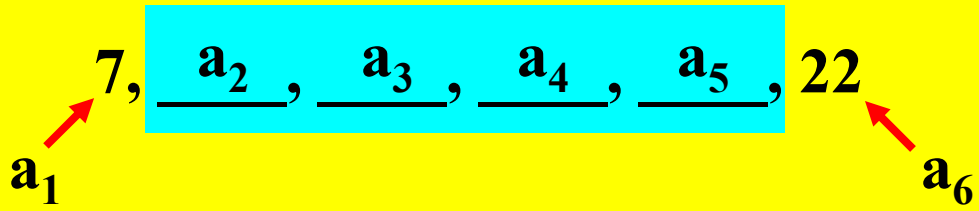

We have learned that in any arithmetic sequence,

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.

$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_2 a_3 a_4 a_5 a_6

We have learned that in any arithmetic sequence,

$a_n =$

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.

$7, \underline{\quad a_2 \quad}, \underline{\quad a_3 \quad}, \underline{\quad a_4 \quad}, \underline{\quad a_5 \quad}, 22$

a_1 a_6

We have learned that in any arithmetic sequence,

$$a_n = a_1 + (n - 1)d$$

Algebra 2 Class Worksheet #3 Unit 9

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$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_2 a_3 a_4 a_5 a_6

We have learned that in any arithmetic sequence,

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Therefore,

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Algebra 2 Class Worksheet #3 Unit 9

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a_1 a_6

We have learned that in any arithmetic sequence,

$$a_n = a_1 + (n - 1)d$$

Therefore, $a_6 = a_1 + 5d$

Algebra 2 Class Worksheet #3 Unit 9

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Substituting, we get

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Therefore, $a_6 = a_1 + 5d$

Substituting, we get 22

Algebra 2 Class Worksheet #3 Unit 9

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Therefore, $a_6 = a_1 + 5d$

Substituting, we get $22 =$

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$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

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We have learned that in any arithmetic sequence,

$$a_n = a_1 + (n - 1)d$$

Therefore, $a_6 = a_1 + 5d$

Substituting, we get $22 = 7$

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Substituting, we get $22 = 7 + 5d$

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Therefore, $a_6 = a_1 + 5d$

Substituting, we get $22 = 7 + 5d$

Now, solve for d.

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We have learned that in any arithmetic sequence,

$$a_n = a_1 + (n - 1)d$$

Therefore, $a_6 = a_1 + 5d$

Substituting, we get $22 = 7 + 5d$

Now, solve for d. $5d = 15$

Algebra 2 Class Worksheet #3 Unit 9

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$d =$

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Now, solve for d. $5d = 15$

$d = 3$

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.

$7, \underline{a_2}, \underline{a_3}, \underline{a_4}, \underline{a_5}, 22$

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$$a_6 = a_1 + 5d$$

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$$5d = 15$$

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$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_6

$$a_6 = a_1 + 5d$$

$$22 = 7 + 5d$$

$$5d = 15$$

$$d = 3$$

Now, starting with the first term,

Algebra 2 Class Worksheet #3 Unit 9

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$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_6

$$a_6 = a_1 + 5d$$

$$22 = 7 + 5d$$

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Now, starting with the first term,

$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

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$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_6

$$a_6 = a_1 + 5d$$

$$22 = 7 + 5d$$

$$5d = 15$$

$$d = 3$$

Now, starting with the first term, we can add d recursively to find the missing terms.

$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

Algebra 2 Class Worksheet #3 Unit 9

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$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_6

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$$5d = 15$$

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Now, starting with the first term, we can add d recursively to find the missing terms.

$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

Add 3 recursively.

Algebra 2 Class Worksheet #3 Unit 9

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$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_6

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$7, \_10\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

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$7, \_\_10\_\_, \_\_13\_\_, \_\_\_\_, \_\_\_\_, 22$

Add 3 recursively.

Algebra 2 Class Worksheet #3 Unit 9

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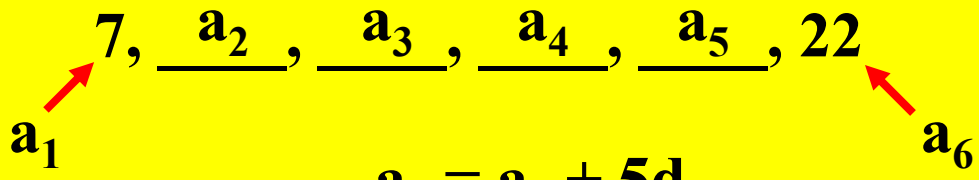

$a_6 = a_1 + 5d$

$22 = 7 + 5d$

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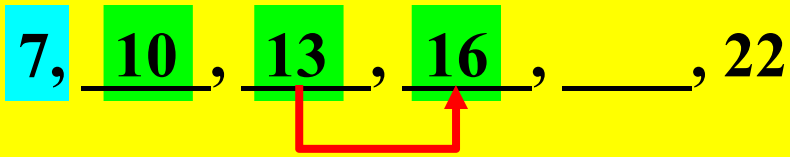
$d = 3$

Now, starting with the first term, we can add d recursively to find the missing terms.



Add 3 recursively.

Algebra 2 Class Worksheet #3 Unit 9

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$7, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 22$

a_1 a_6

$$a_6 = a_1 + 5d$$

$$22 = 7 + 5d$$

$$5d = 15$$

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Now, starting with the first term, we can add d recursively to find the missing terms.

$7, \_10\_, \_13\_, \_16\_, \_19\_, 22$

Add 3 recursively.

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.

$7, \_\_\_\_(a_2), \_\_\_\_(a_3), \_\_\_\_(a_4), \_\_\_\_(a_5), 22$

a_1 a_6

$$a_6 = a_1 + 5d$$

$$22 = 7 + 5d$$

$$5d = 15$$

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Now, starting with the first term, we can add d recursively to find the missing terms.

7, 10, 13, 16, 19, 22

Add 3 recursively.

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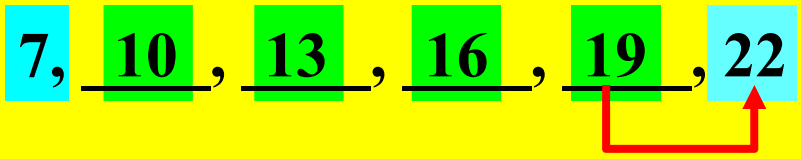
$7, \_10\_, \_13\_, \_16\_, \_19\_, 22$



Add 3 recursively. (It is correct.)

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.

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a_1 a_6

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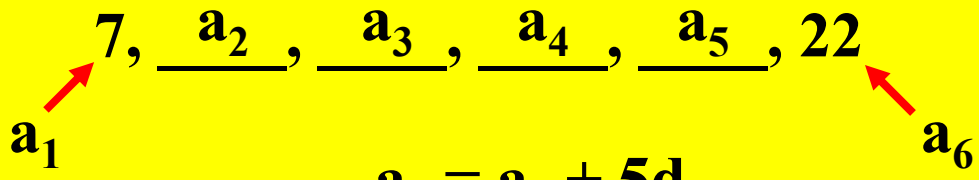
$7, \_\_10\_\_, \_\_13\_\_, \_\_16\_\_, \_\_19\_\_, 22$

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.



$a_6 = a_1 + 5d$

$22 = 7 + 5d$

$5d = 15$

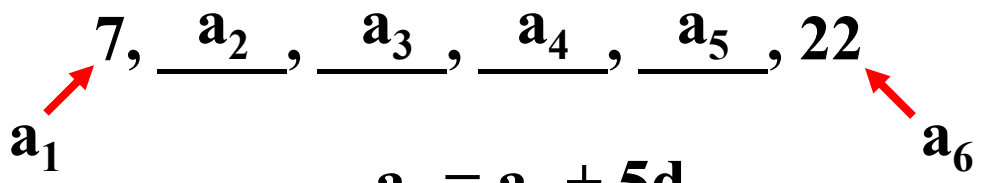
$d = 3$

7, 10, 13, 16, 19, 22

The 4 arithmetic means between 7 and 22 are 10, 13, 16 and 19.

Algebra 2 Class Worksheet #3 Unit 9

1. Find 4 arithmetic means between 7 and 22.



$$a_6 = a_1 + 5d$$

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$$5d = 15$$

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7, 10 , 13 , 16 , 19 , 22

The 4 arithmetic means between 7 and 22 are 10, 13, 16 and 19.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

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10, ____, ____, ____, ____, ____, 25

Algebra 2 Class Worksheet #3 Unit 9

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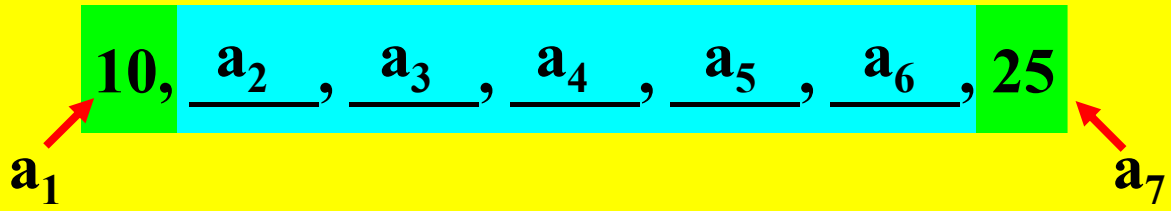

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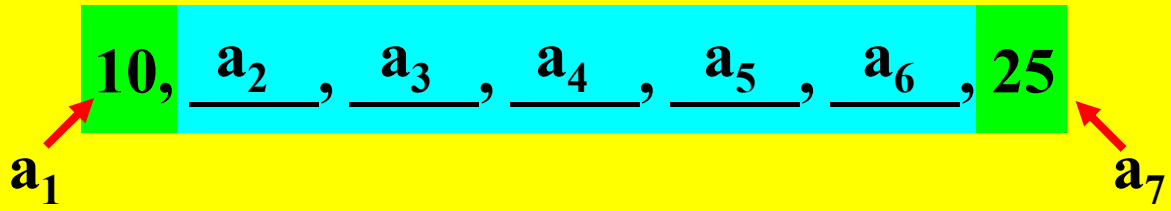
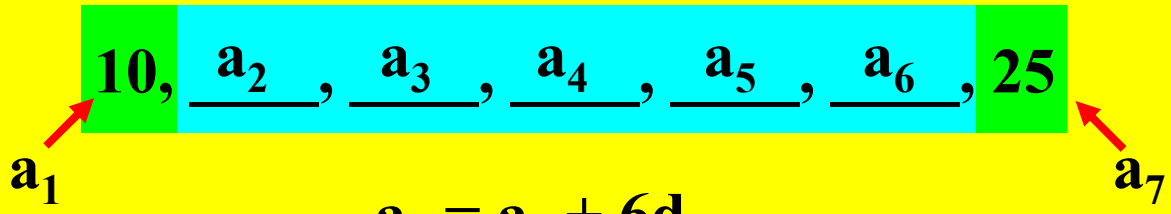


$$a_n = a_1 + (n - 1)d$$

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

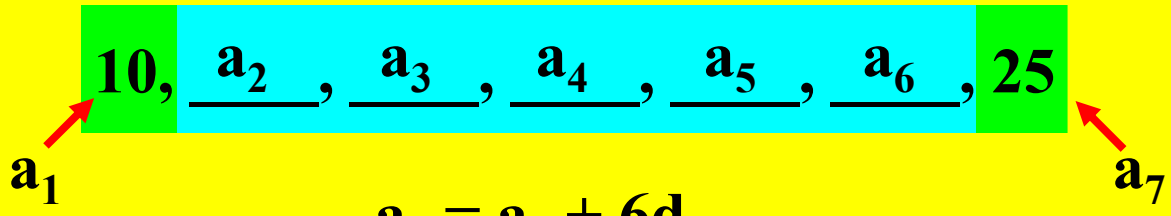


$$a_7 = a_1 + 6d$$

$$a_n = a_1 + (n - 1)d$$

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.



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Algebra 2 Class Worksheet #3 Unit 9

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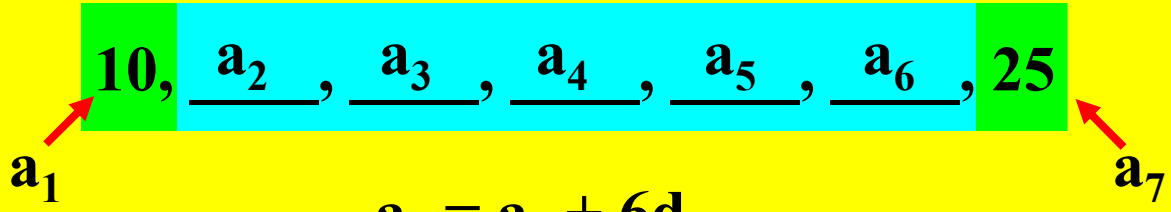
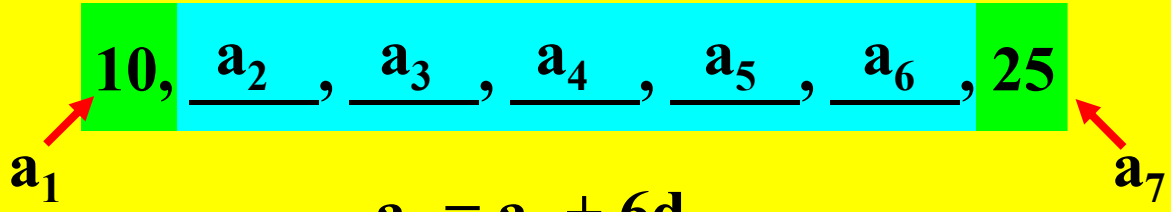


$a_7 = a_1 + 6d$

25

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.



$a_7 = a_1 + 6d$

$25 =$

Algebra 2 Class Worksheet #3 Unit 9

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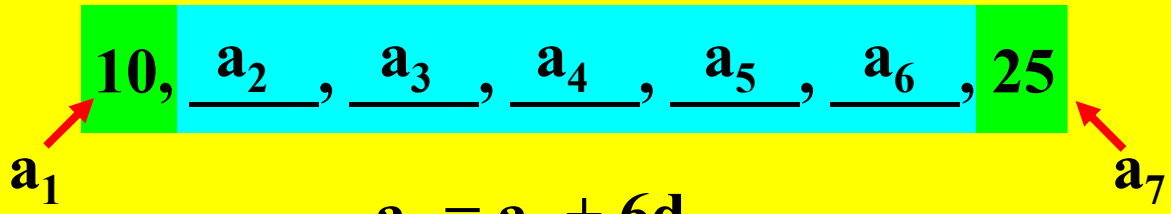

$a_7 = a_1 + 6d$

$25 = 10$

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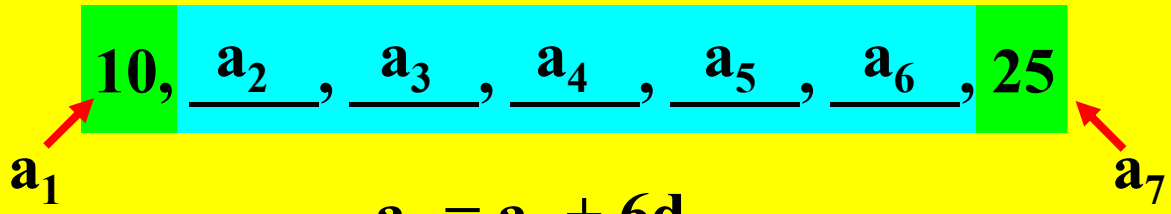

$a_7 = a_1 + 6d$

$25 = 10 + 6d$

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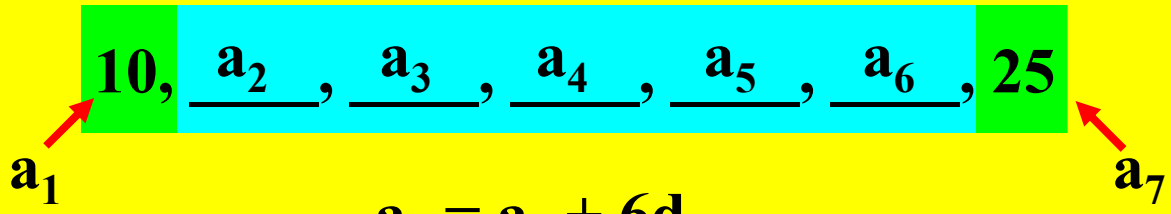

$a_7 = a_1 + 6d$

$25 = 10 + 6d$

$6d$

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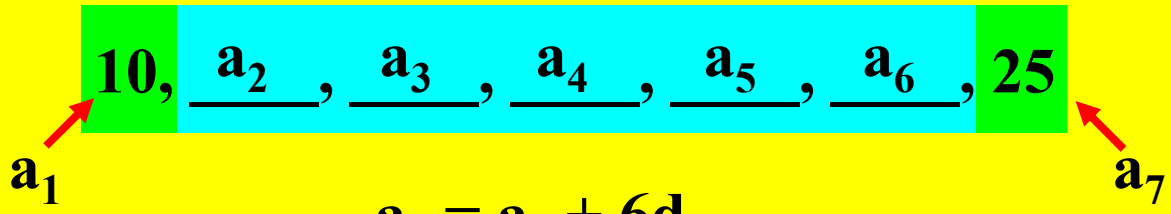

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Algebra 2 Class Worksheet #3 Unit 9

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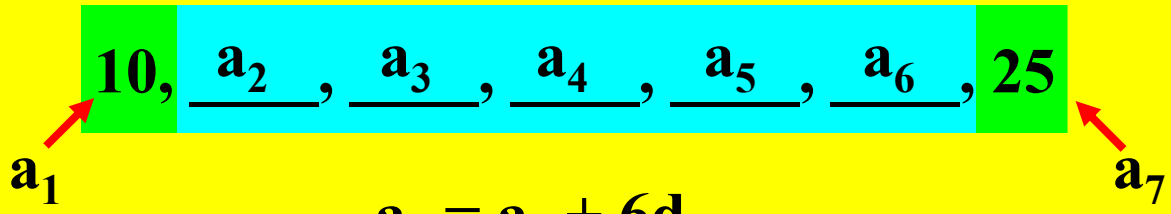

$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

$$6d = 15$$

Algebra 2 Class Worksheet #3 Unit 9

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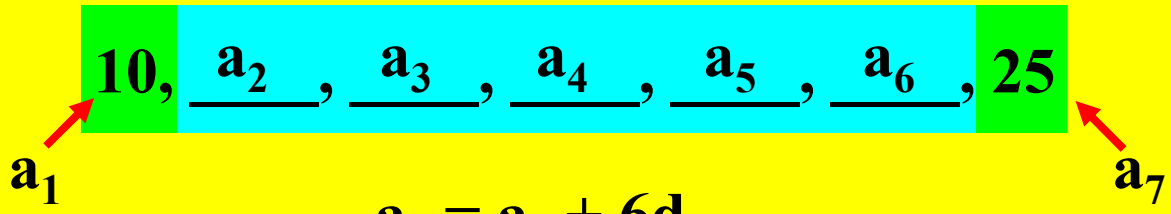

$a_7 = a_1 + 6d$

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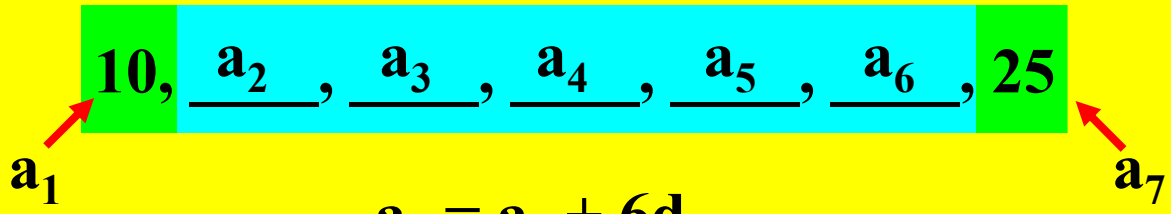

$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

$$6d = 15$$

$$d = 2.5$$

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

10, ____, ____, ____, ____, ____, 25

$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

$$6d = 15$$

$$d = 2.5$$

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2. Find 5 arithmetic means between 10 and 25.

10, ____, ____, ____, ____, ____, 25

$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

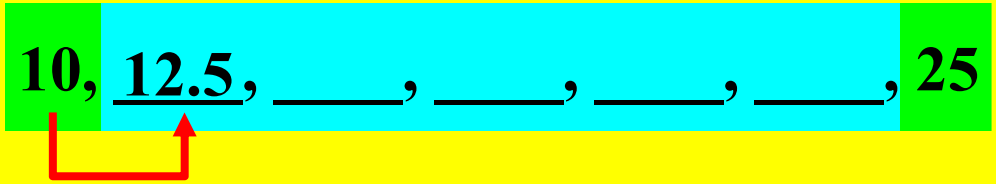
$$6d = 15$$

$$d = 2.5$$

Add 2.5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.



$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

$$6d = 15$$

$$d = 2.5$$

Add 2.5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

10, 12.5, 15, ____, ____, ____, 25

$a_7 = a_1 + 6d$

$25 = 10 + 6d$

$6d = 15$

$d = 2.5$

Add 2.5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

10, 12.5, 15, 17.5, ____, ____, 25

$a_7 = a_1 + 6d$

$25 = 10 + 6d$

$6d = 15$

$d = 2.5$

Add 2.5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

10, 12.5, 15, 17.5, 20, ____, 25

$a_7 = a_1 + 6d$

$25 = 10 + 6d$

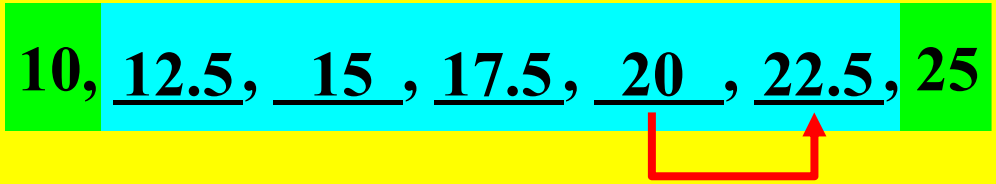
$6d = 15$

$d = 2.5$

Add 2.5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.



$a_7 = a_1 + 6d$

$25 = 10 + 6d$

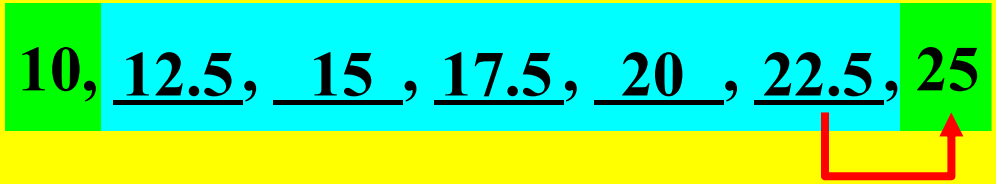
$6d = 15$

$d = 2.5$

Add 2.5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.



$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

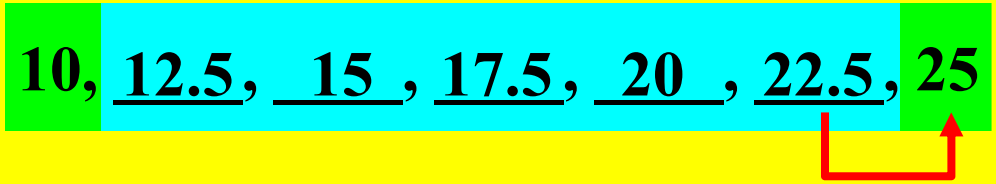
$$6d = 15$$

$$d = 2.5$$

Add 2.5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.



$a_7 = a_1 + 6d$

$25 = 10 + 6d$

$6d = 15$

$d = 2.5$

Add 2.5 recursively. It is correct.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

10, 12.5, 15, 17.5, 20, 22.5, 25

$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

$$6d = 15$$

$$d = 2.5$$

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

10, 12.5, 15, 17.5, 20, 22.5, 25

$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

$$6d = 15$$

$$d = 2.5$$

The 5 arithmetic means between 10 and 25 are 12.5, 15, 17.5, 20 and 22.5.

Algebra 2 Class Worksheet #3 Unit 9

2. Find 5 arithmetic means between 10 and 25.

$$10, \underline{12.5}, \underline{\ 15\ }, \underline{17.5}, \underline{\ 20\ }, \underline{22.5}, 25$$

$$a_7 = a_1 + 6d$$

$$25 = 10 + 6d$$

$$6d = 15$$

$$d = 2.5$$

The 5 arithmetic means between 10 and 25 are 12.5, 15, 17.5, 20 and 22.5.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

This time, we are only looking for one number.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

12, _____, 20

This time, we are only looking for one number.

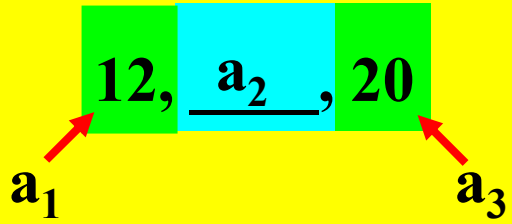
Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

12, _____, 20

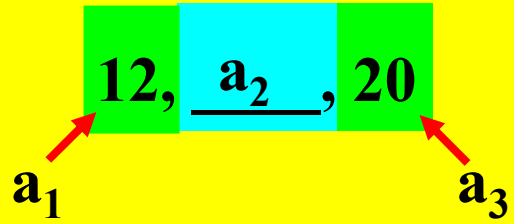
Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.



Algebra 2 Class Worksheet #3 Unit 9

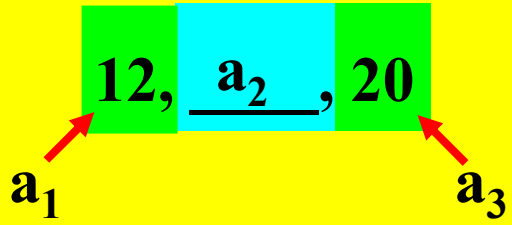
3. Find the arithmetic mean of 12 and 20.



$$a_n = a_1 + (n - 1)d$$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

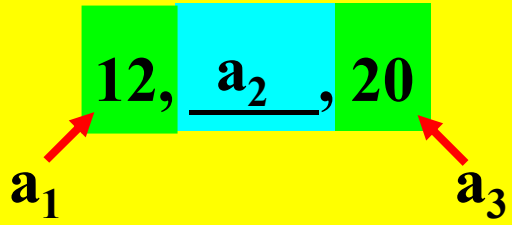


$$a_3 = a_1 + 2d$$

$$a_n = a_1 + (n - 1)d$$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.



$a_3 = a_1 + 2d$

Algebra 2 Class Worksheet #3 Unit 9

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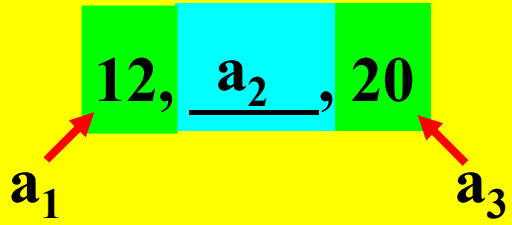
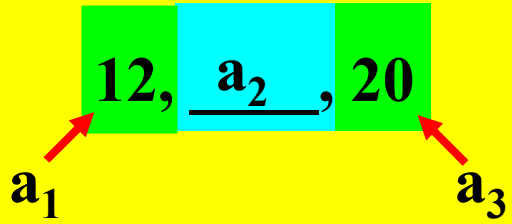


$a_3 = a_1 + 2d$

20

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

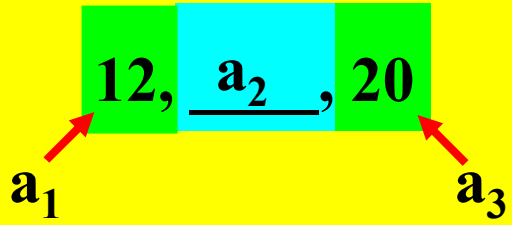


$a_3 = a_1 + 2d$

$20 =$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

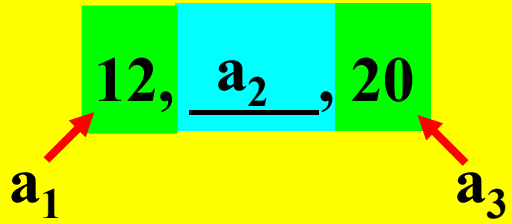


$a_3 = a_1 + 2d$

$20 = 12$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

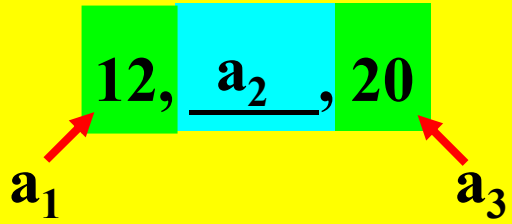


$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.



$a_3 = a_1 + 2d$

$20 = 12 + 2d$

$2d$

Algebra 2 Class Worksheet #3 Unit 9

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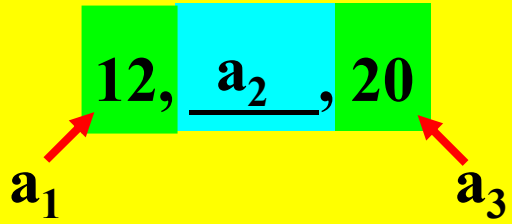


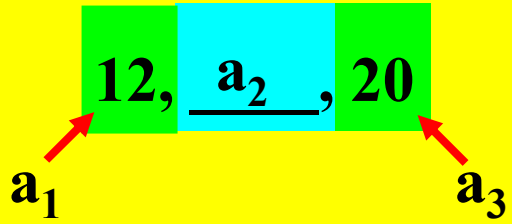
$a_3 = a_1 + 2d$

$20 = 12 + 2d$

$2d =$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.



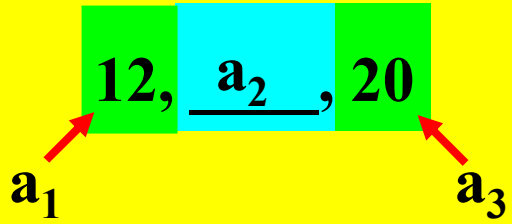
$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

$$2d = 8$$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.



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$d =$

Algebra 2 Class Worksheet #3 Unit 9

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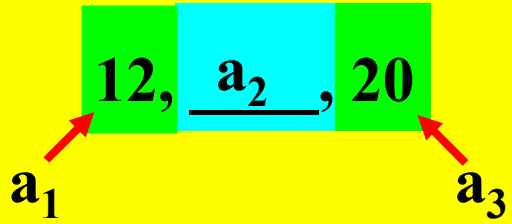


$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

$$2d = 8$$

$$d = 4$$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

12, _____, 20

$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

$$2d = 8$$

$$d = 4$$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

12, _____, 20

$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

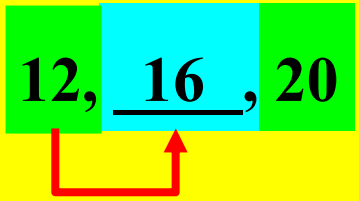
$$2d = 8$$

$$d = 4$$

Add 4 recursively.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.



$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

$$2d = 8$$

$$d = 4$$

Add 4 recursively.

Algebra 2 Class Worksheet #3 Unit 9

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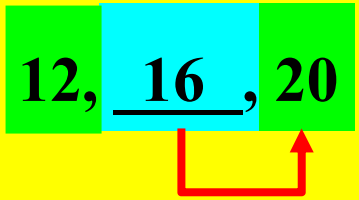


$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

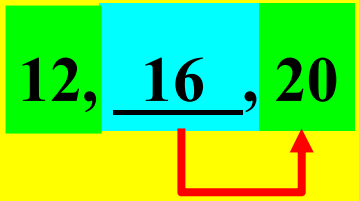
$$2d = 8$$

$$d = 4$$

Add 4 recursively.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.



$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

$$2d = 8$$

$$d = 4$$

Add 4 recursively. It is correct.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

12, 16 , 20

$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

$$2d = 8$$

$$d = 4$$

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

12, 16 , 20

$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

$$2d = 8$$

$$d = 4$$

The arithmetic mean of 12 and 20 is 16.

Algebra 2 Class Worksheet #3 Unit 9

3. Find the arithmetic mean of 12 and 20.

$$12, \underline{\quad 16 \quad}, 20$$

$$a_3 = a_1 + 2d$$

$$20 = 12 + 2d$$

$$2d = 8$$

$$d = 4$$

The arithmetic mean of 12 and 20 is 16.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

This time we are dealing with a geometric sequence.

Algebra 2 Class Worksheet #3 Unit 9

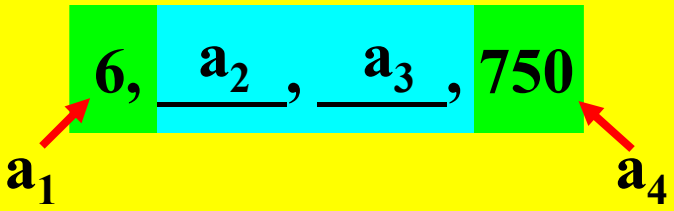
4. Find 2 geometric means between 6 and 750.

6, ____, ____, 750

This time we are dealing with a geometric sequence.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



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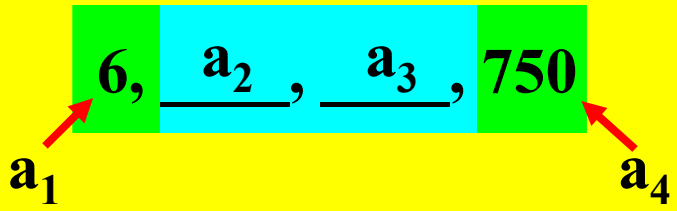
Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

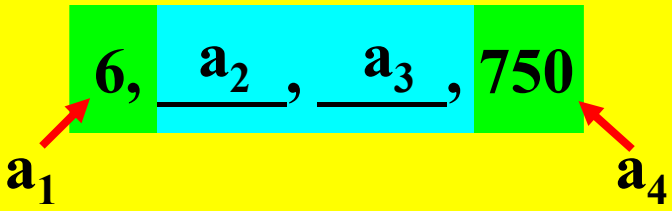


This time we are dealing with a geometric sequence.

$a_n =$

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

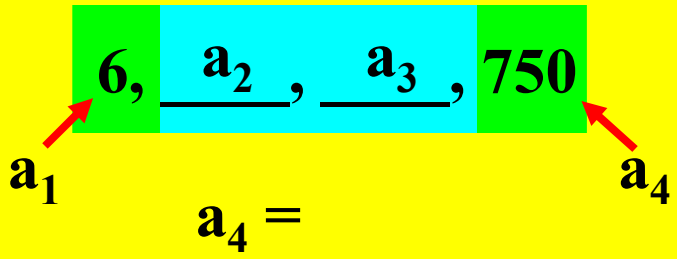


This time we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



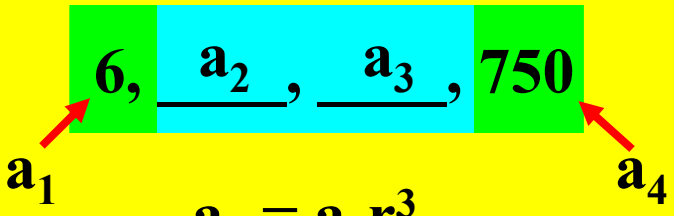
$a_4 =$

This time we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



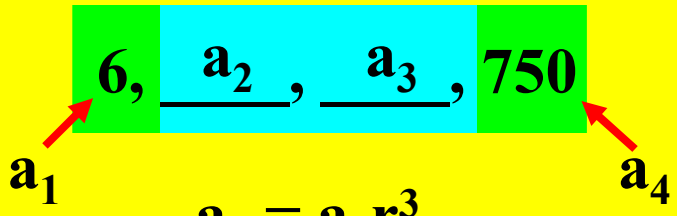
$a_4 = a_1 r^3$

This time we are dealing with a geometric sequence.

$a_n = a_1 r^{(n-1)}$

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$a_4 = a_1 r^3$

750

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Algebra 2 Class Worksheet #3 Unit 9

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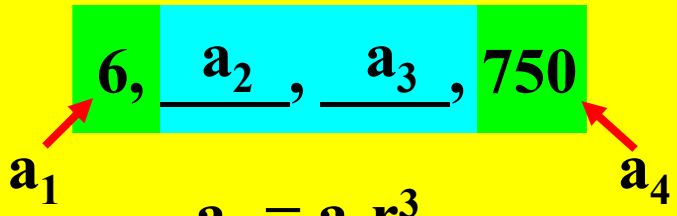

$a_4 = a_1 r^3$

$750 =$

This time we are dealing with a geometric sequence.

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Algebra 2 Class Worksheet #3 Unit 9

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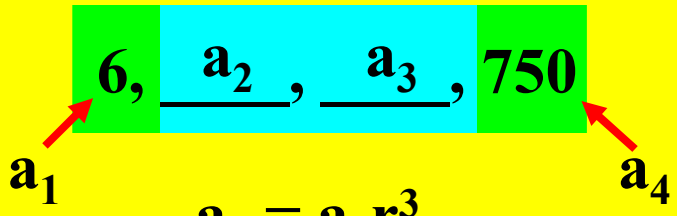


$$a_4 = a_1 r^3$$

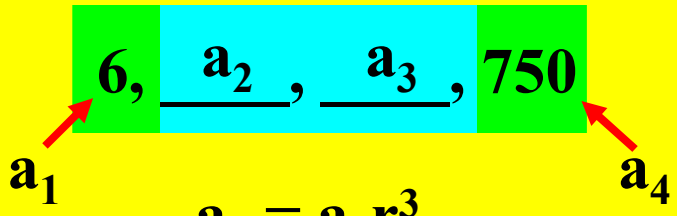
$$750 = 6r^3$$

This time we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

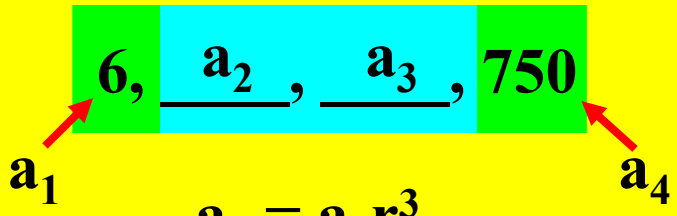


$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



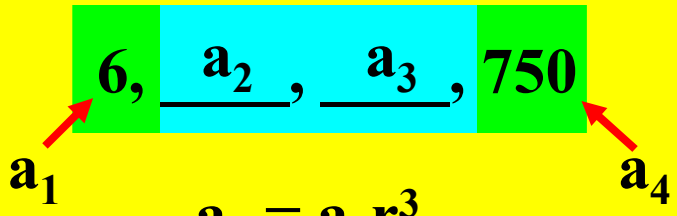
$a_4 = a_1 r^3$

$750 = 6r^3$

Solve for r.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$$a_4 = a_1 r^3$$

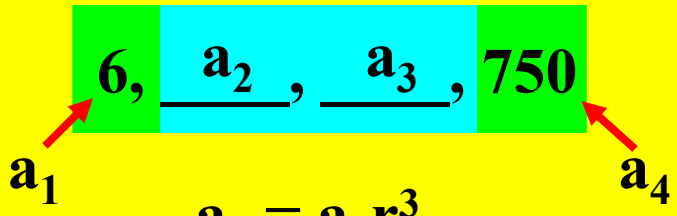
$$750 = 6r^3$$

$$r^3$$

Solve for r.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$a_4 = a_1 r^3$

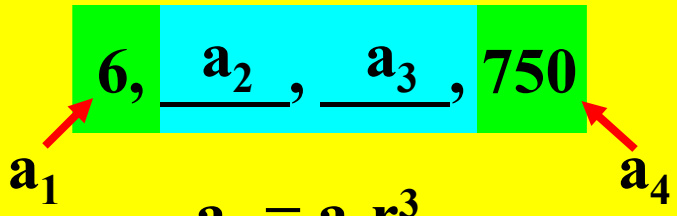
$750 = 6r^3$

$r^3 =$

Solve for r.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$a_4 = a_1 r^3$

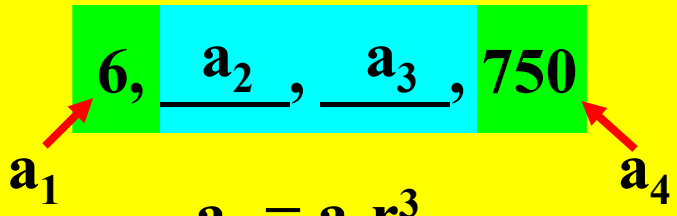
$750 = 6r^3$

$r^3 = 125$

Solve for r.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

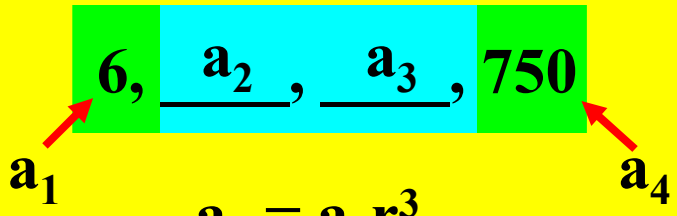
$$r^3 = 125$$

$$r =$$

Solve for r.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$a_4 = a_1 r^3$

$750 = 6r^3$

$r^3 = 125$

$r = 5$

Solve for r.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

$6, \_\_\_\_, \_\_\_\_, 750$

$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

$$r^3 = 125$$

$$r = 5$$

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

6, ____, ____, 750

$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

$$r^3 = 125$$

$$r = 5$$

Multiply by 5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

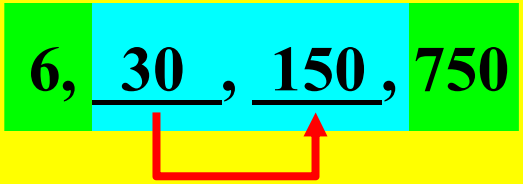
$$r^3 = 125$$

$$r = 5$$

Multiply by 5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$a_4 = a_1 r^3$

$750 = 6r^3$

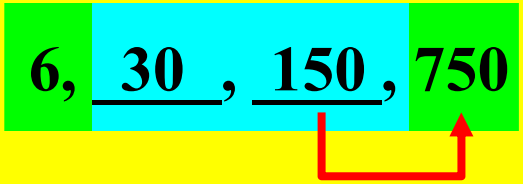
$r^3 = 125$

$r = 5$

Multiply by 5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

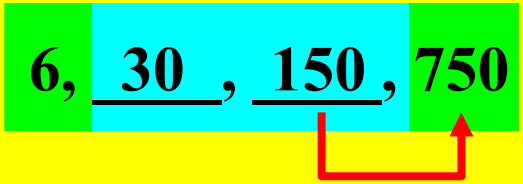
$$r^3 = 125$$

$$r = 5$$

Multiply by 5 recursively.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.



$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

$$r^3 = 125$$

$$r = 5$$

Multiply by 5 recursively. It is correct.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

6, 30, 150, 750

$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

$$r^3 = 125$$

$$r = 5$$

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

6, 30, 150, 750

$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

$$r^3 = 125$$

$$r = 5$$

The 2 geometric means between 6 and 750 are 30 and 150.

Algebra 2 Class Worksheet #3 Unit 9

4. Find 2 geometric means between 6 and 750.

$$6, \underline{\ 30\ }, \underline{\ 150\ }, 750$$

$$a_4 = a_1 r^3$$

$$750 = 6r^3$$

$$r^3 = 125$$

$$r = 5$$

The 2 geometric means between 6 and 750 are 30 and 150.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

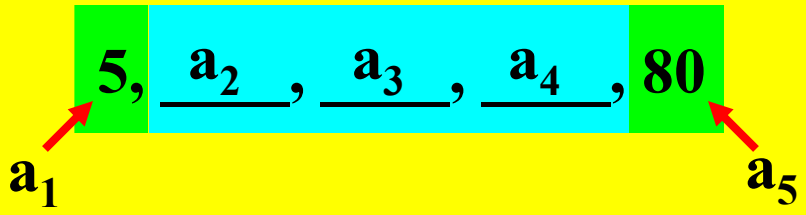
Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

5, ____, ____, ____, 80

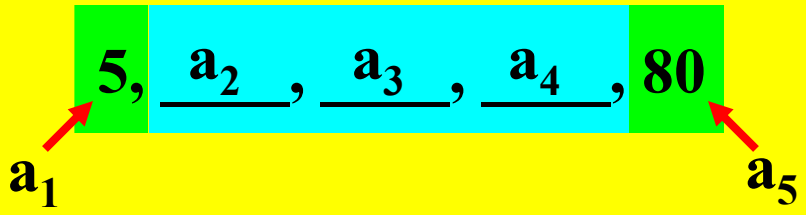
Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



Algebra 2 Class Worksheet #3 Unit 9

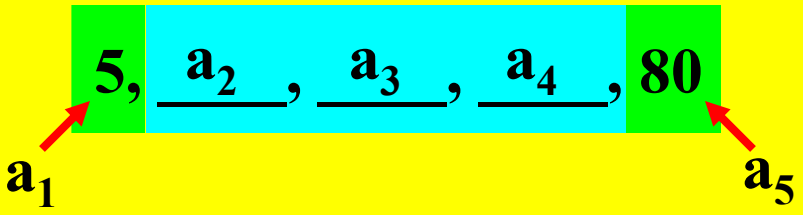
5. Find 3 geometric means between 5 and 80.



Once again, we are dealing with a geometric sequence.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

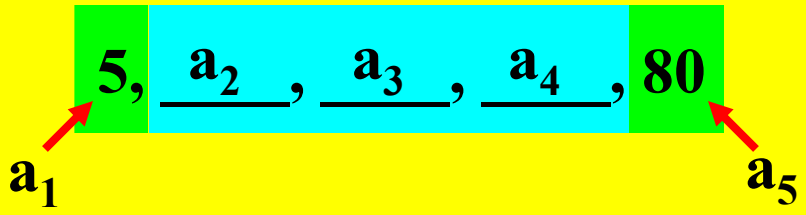


Once again, we are dealing with a geometric sequence.

$a_n =$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

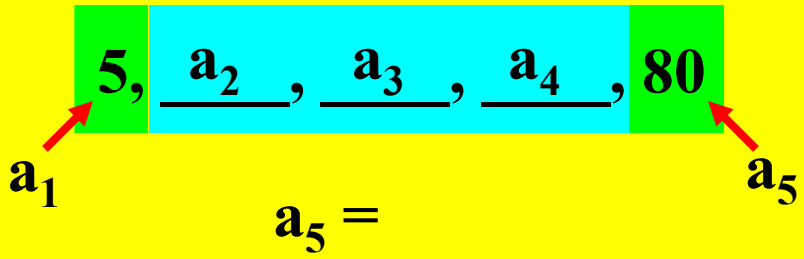


Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



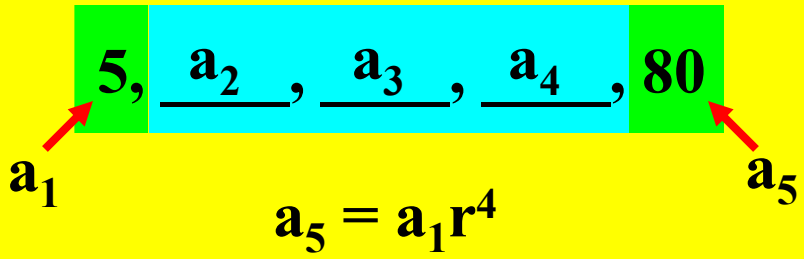
$a_5 =$

Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$a_5 = a_1 r^4$

Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

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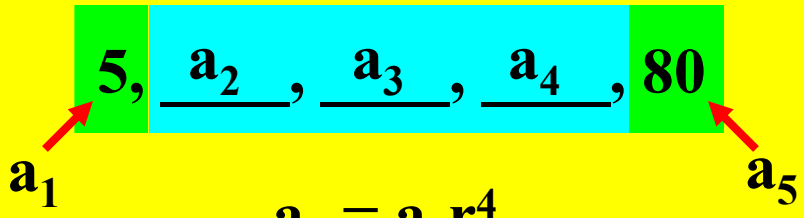


$a_5 = a_1 r^4$

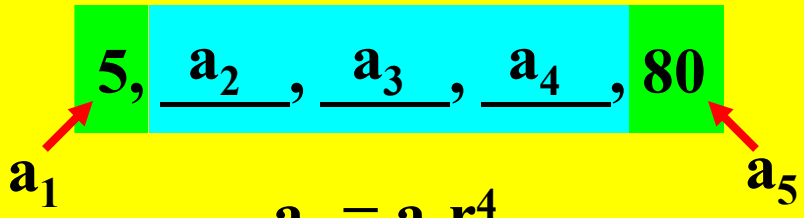
$80 =$

Once again, we are dealing with a geometric sequence.

$a_n = a_1 r^{(n-1)}$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

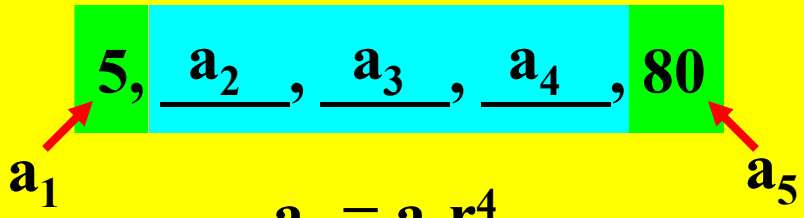
$$80 = 5r^4$$

Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

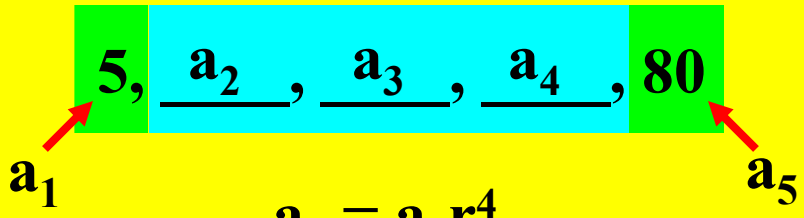
$$r^4$$

Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

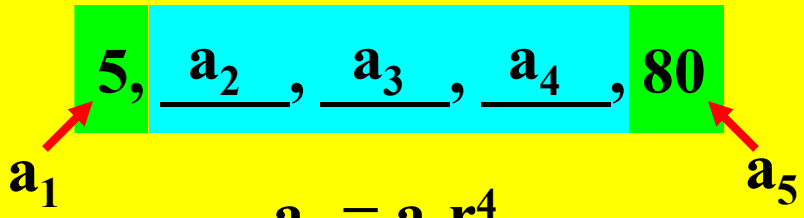
$$r^4 = 16$$

Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

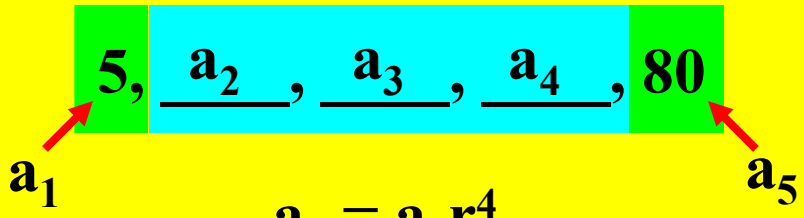
$$r = 2$$

Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

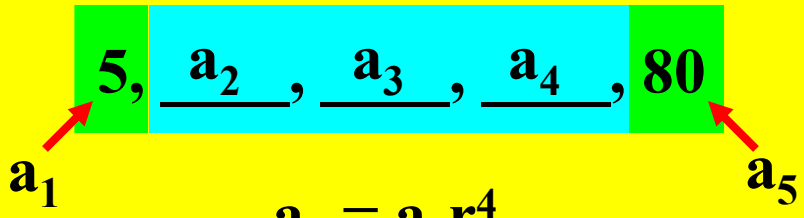
$$r = 2 \text{ or}$$

Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

Once again, we are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

5, ____, ____, ____, 80

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

5, ____, ____, ____, 80

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

Algebra 2 Class Worksheet #3 Unit 9

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5, ____, ____, ____, 80

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

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5, ____, ____, ____, 80

$$a_5 = a_1 r^4$$

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$$r^4 = 16$$

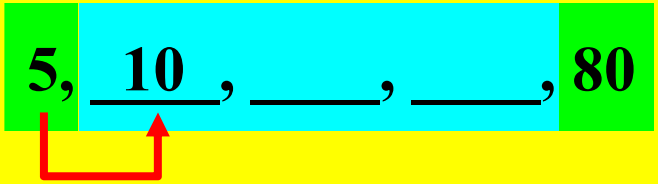
r = 2 or r = -2

This time, there are two sets of solutions.

First, multiply by 2 recursively.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



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Algebra 2 Class Worksheet #3 Unit 9

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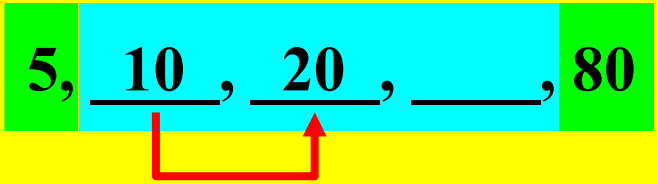

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$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

First, multiply by 2 recursively.

Algebra 2 Class Worksheet #3 Unit 9

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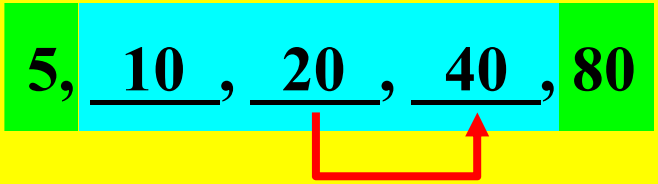

$a_5 = a_1 r^4$

$80 = 5r^4$

$r^4 = 16$

$r = 2$ or $r = -2$

This time, there are two sets of solutions.

First, multiply by 2 recursively.

Algebra 2 Class Worksheet #3 Unit 9

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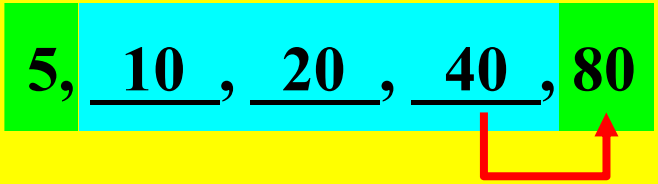

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

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Algebra 2 Class Worksheet #3 Unit 9

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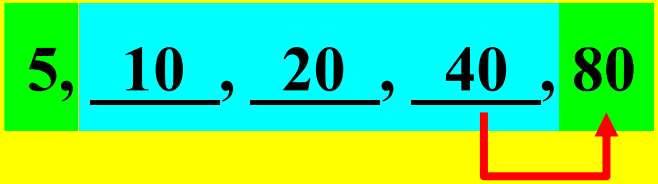


$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

First, multiply by 2 recursively. It is correct.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

5, 10, 20, 40, 80

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

5, 10, 20, 40, 80

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

5, ____, ____, ____, 80

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

5, ____, ____, ____, 80

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

5, ____, ____, ____, 80

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

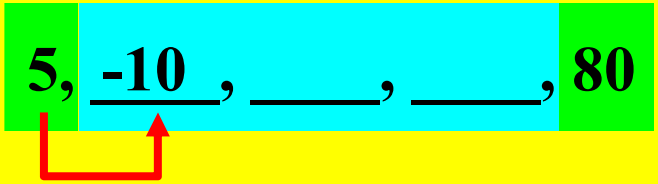
This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Now, multiply by -2 recursively.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

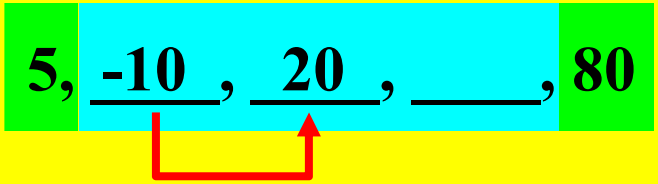
This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Now, multiply by -2 recursively.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

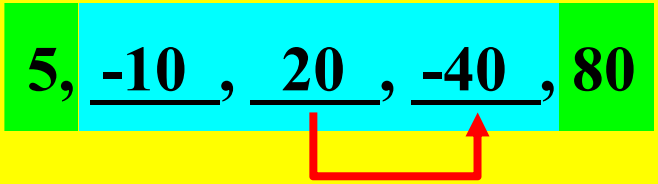
This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Now, multiply by -2 recursively.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Now, multiply by -2 recursively.

Algebra 2 Class Worksheet #3 Unit 9

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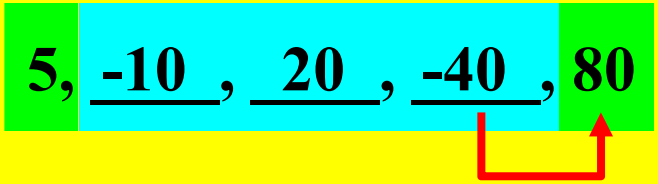


$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

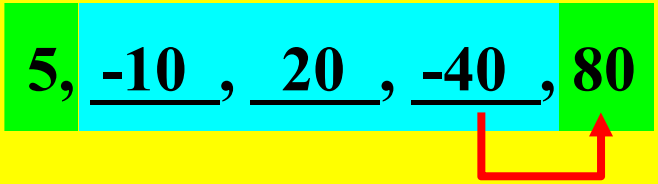
This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Now, multiply by -2 recursively.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

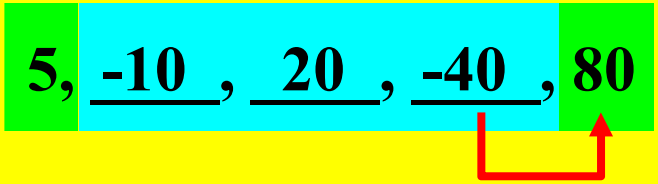
This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40.

Now, multiply by -2 recursively. It is correct.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.



$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

This time, there are two sets of solutions.

The 3 geometric means between 5 and 80 are 10, 20, and 40, or they are -10, 20, and -40.

Now, multiply by -2 recursively. It is correct.

Algebra 2 Class Worksheet #3 Unit 9

5. Find 3 geometric means between 5 and 80.

$$5, \underline{\pm 10}, \underline{\quad 20 \quad}, \underline{\pm 40}, 80$$

$$a_5 = a_1 r^4$$

$$80 = 5r^4$$

$$r^4 = 16$$

$$r = 2 \text{ or } r = -2$$

The 3 geometric means between 5 and 80 are 10, 20, and 40, or they are -10, 20, and -40.

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.

This time, we are only looking for one number.

Algebra 2 Class Worksheet #3 Unit 9

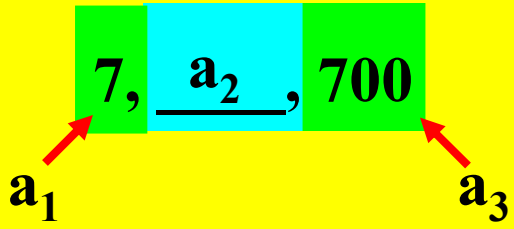
6. Find the geometric mean of 7 and 700.

7, ____, 700

This time, we are only looking for one number.

Algebra 2 Class Worksheet #3 Unit 9

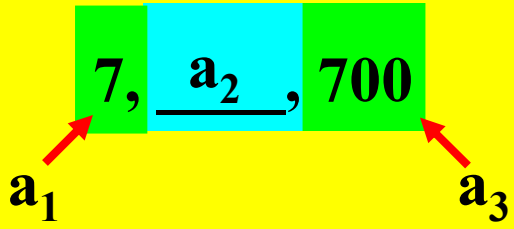
6. Find the geometric mean of 7 and 700.



This time, we are only looking for one number.

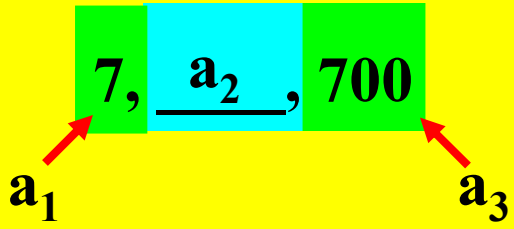
Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.



Algebra 2 Class Worksheet #3 Unit 9

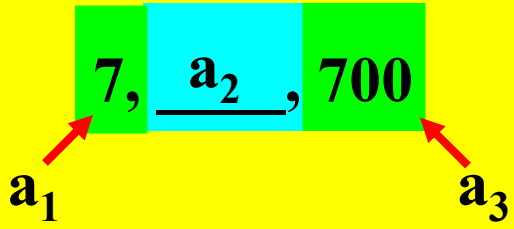
6. Find the geometric mean of 7 and 700.



We are dealing with a geometric sequence.

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.

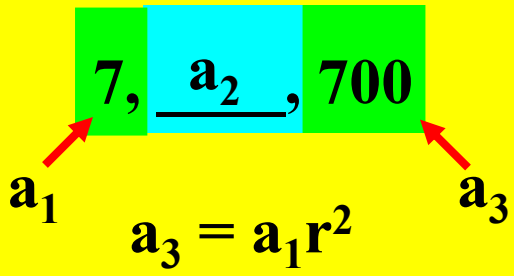


We are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.



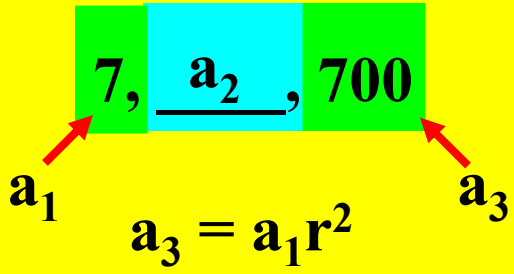
$a_3 = a_1 r^2$

We are dealing with a geometric sequence.

$$a_n = a_1 r^{(n-1)}$$

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.



Algebra 2 Class Worksheet #3 Unit 9

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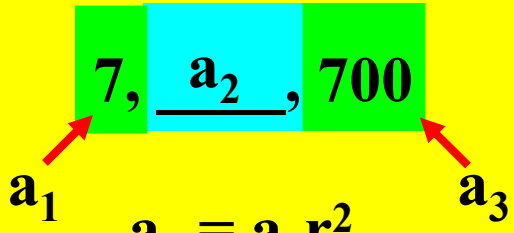
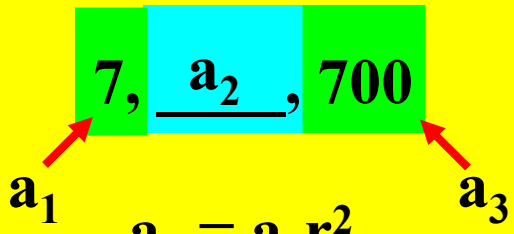


$a_3 = a_1 r^2$

700

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.



$a_3 = a_1 r^2$

$700 =$

Algebra 2 Class Worksheet #3 Unit 9

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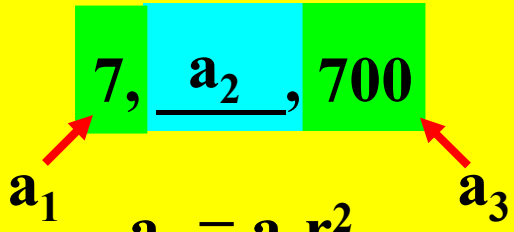

$a_3 = a_1 r^2$

$700 = 7r^2$

Algebra 2 Class Worksheet #3 Unit 9

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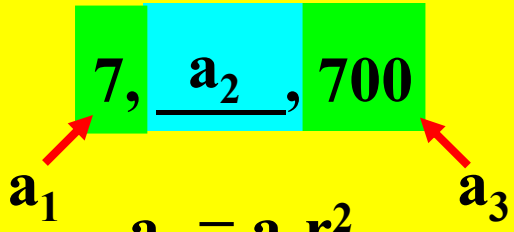

$a_3 = a_1 r^2$

$700 = 7r^2$

r^2

Algebra 2 Class Worksheet #3 Unit 9

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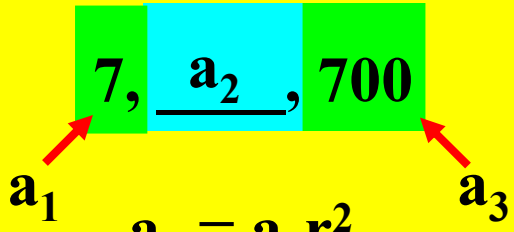

$a_3 = a_1r^2$

$700 = 7r^2$

$r^2 =$

Algebra 2 Class Worksheet #3 Unit 9

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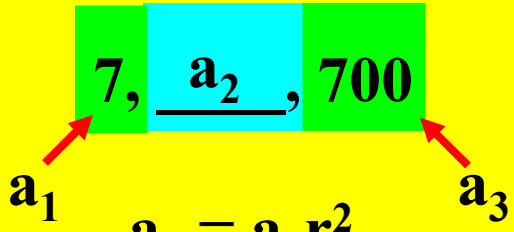

$a_3 = a_1 r^2$

$700 = 7r^2$

$r^2 = 100$

Algebra 2 Class Worksheet #3 Unit 9

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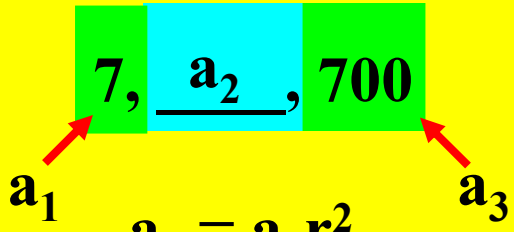

$a_3 = a_1 r^2$

$700 = 7r^2$

$r^2 = 100$

$r = 10$

Algebra 2 Class Worksheet #3 Unit 9

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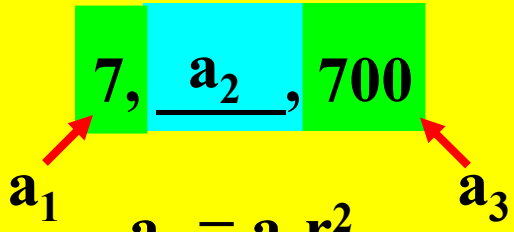

$a_3 = a_1 r^2$

$700 = 7r^2$

$r^2 = 100$

$r = 10$ or

Algebra 2 Class Worksheet #3 Unit 9

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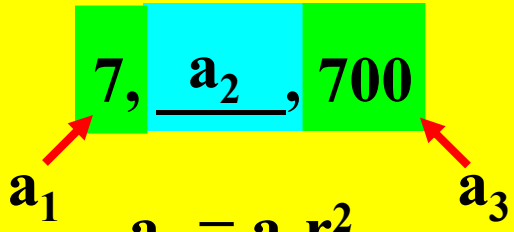

$$a_3 = a_1 r^2$$

$$700 = 7r^2$$

$$r^2 = 100$$

$$r = 10 \text{ or } r = -10$$

Algebra 2 Class Worksheet #3 Unit 9

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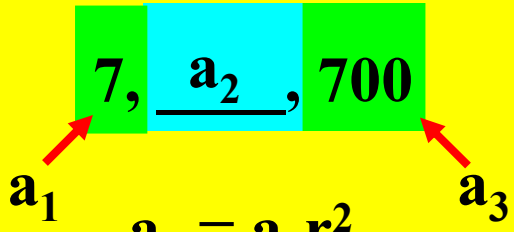

$a_3 = a_1r^2$

$700 = 7r^2$

$r^2 = 100$

$r = 10$ or $r = -10$

If $r = 10$,

Algebra 2 Class Worksheet #3 Unit 9

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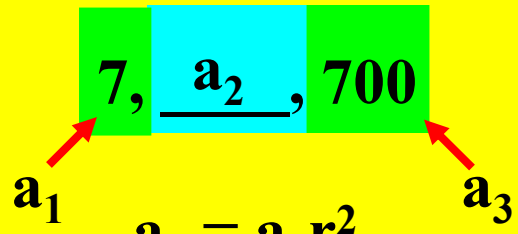


$a_3 = a_1r^2$

$700 = 7r^2$

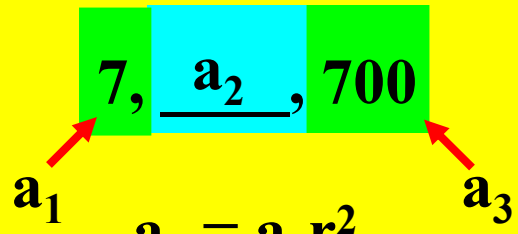
$r^2 = 100$

$r = 10$ or $r = -10$

If $r = 10$, then $a_2 = 70$.

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.



$a_3 = a_1r^2$

$700 = 7r^2$

$r^2 = 100$

$r = 10$ or $r = -10$

If $r = 10$, then $a_2 = 70$. If $r = -10$,

Algebra 2 Class Worksheet #3 Unit 9

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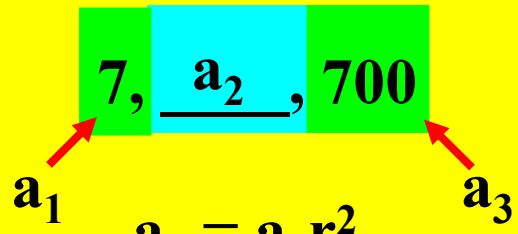

$a_3 = a_1r^2$

$700 = 7r^2$

$r^2 = 100$

$r = 10$ or $r = -10$

If $r = 10$, then $a_2 = 70$. If $r = -10$, then $a_2 = -70$.

Algebra 2 Class Worksheet #3 Unit 9

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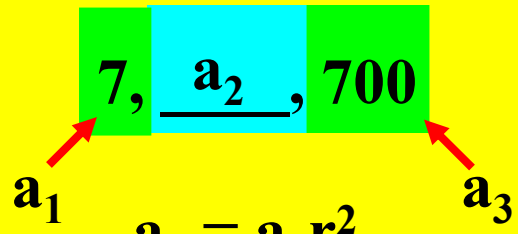

$a_3 = a_1r^2$

$700 = 7r^2$

$r^2 = 100$

$r = 10$ or $r = -10$

If $r = 10$, then $a_2 = 70$. If $r = -10$, then $a_2 = -70$.

The geometric mean of 7 and 700 is 70 or -70.

Algebra 2 Class Worksheet #3 Unit 9

6. Find the geometric mean of 7 and 700.

$$7, \underline{\quad a_2 \quad}, 700$$

a_1 a_3

$$a_3 = a_1 r^2$$

$$700 = 7r^2$$

$$r^2 = 100$$

$$r = 10 \text{ or } r = -10$$

If $r = 10$, then $a_2 = 70$. If $r = -10$, then $a_2 = -70$.

The geometric mean of 7 and 700 is 70 or -70.

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

7. A particular job has a starting salary of $38,000 per year with a guaranteed raise of $1,200 per year. What will be the salary for the 6th year?

Algebra 2 Class Worksheet #3 Unit 9

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Consider the sequence of numbers representing the salary for the job over a number of years.

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$a_1 =$

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Consider the sequence of numbers representing the salary for the job over a number of years.

$a_1 = 38{,}000$

Algebra 2 Class Worksheet #3 Unit 9

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Consider the sequence of numbers representing the salary for the job over a number of years.

→ $a_1 = 38{,}000$

→ **The sequence is arithmetic**

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

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Consider the sequence of numbers representing the salary for the job over a number of years.

⇒ $a_1 = 38{,}000$

⇒ **The sequence is arithmetic and d = 1,200.**

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Consider the sequence of numbers representing the salary for the job over a number of years.

→ $a_1 = 38{,}000$

→ **The sequence is arithmetic and d = 1,200.**

$a_6 =$

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

7. A particular job has a starting salary of $38,000 per year with a guaranteed raise of $1,200 per year. What will be the salary for the 6th year?

Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow$ $a_1 = 38{,}000$

$\Rightarrow$ **The sequence is arithmetic and d = 1,200.**

$a_6 = a_1 + 5d$

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

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Consider the sequence of numbers representing the salary for the job over a number of years.

⇒ $a_1 = 38{,}000$

⇒ **The sequence is arithmetic and d = 1,200.**

$a_6 = a_1 + 5d$

$a_6 =$

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$$a_6 = a_1 + 5d$$

$$a_6 = 38{,}000$$

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⇒ $a_1 = 38{,}000$

⇒ **The sequence is arithmetic and d = 1,200.**

$a_6 = a_1 + 5d$

$a_6 = 38{,}000 +$

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Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ **The sequence is arithmetic and d = 1,200.**

$$a_6 = a_1 + 5d$$

$$a_6 = 38{,}000 + 5(1{,}200)$$

Algebra 2 Class Worksheet #3 Unit 9

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$$a_6 = a_1 + 5d$$

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$$a_6 =$$

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Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ **The sequence is arithmetic and d = 1,200.**

$$a_6 = a_1 + 5d$$

$$a_6 = 38{,}000 + 5(1{,}200)$$

$$a_6 = 44{,}000$$

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

7. A particular job has a starting salary of $38,000 per year with a guaranteed raise of $1,200 per year. What will be the salary for the 6th year?

Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ **The sequence is arithmetic and d = 1,200.**

$$a_6 = a_1 + 5d$$

$$a_6 = 38{,}000 + 5(1{,}200)$$

$$a_6 = 44{,}000$$

The salary for the 6^{th} year will be $44,000.

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

7. A particular job has a starting salary of $38,000 per year with a guaranteed raise of $1,200 per year. What will be the salary for the 6th year?

Consider the sequence of numbers representing the salary for the job over a number of years.

→ $a_1 = 38{,}000$

→ **The sequence is arithmetic and d = 1,200.**

$$a_6 = a_1 + 5d$$

$$a_6 = 38{,}000 + 5(1{,}200)$$

$$a_6 = 44{,}000$$

The salary for the 6^{th} year will be $44,000.

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

8. A particular job has a starting salary of $38,000 per year with a guaranteed raise of 3% per year. What will be the salary for the 6th year?

Algebra 2 Class Worksheet #3 Unit 9

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Consider the sequence of numbers representing the salary for the job over a number of years.

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8. A particular job has a starting salary of $38,000 per year with a guaranteed raise of 3% per year. What will be the salary for the 6th year?

Consider the sequence of numbers representing the salary for the job over a number of years.

→ $a_1 = 38{,}000$

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Consider the sequence of numbers representing the salary for the job over a number of years.

→ $a_1 = 38{,}000$

→ **The sequence is geometric**

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

8. A particular job has a starting salary of $38,000 per year with a guaranteed raise of 3% per year. What will be the salary for the 6th year?

Consider the sequence of numbers representing the salary for the job over a number of years.

⇒ $a_1 = 38{,}000$

⇒ **The sequence is geometric and r = 1.03.**

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

8. A particular job has a starting salary of $38,000 per year with a guaranteed raise of 3% per year. What will be the salary for the 6th year?

Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ The sequence is geometric and r = 1.03.

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→ $a_1 = 38{,}000$

→ **The sequence is geometric and r = 1.03.**

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Consider the sequence of numbers representing the salary for the job over a number of years.

→ $a_1 = 38{,}000$

→ **The sequence is geometric and r = 1.03.**

$a_6 =$

Algebra 2 Class Worksheet #3 Unit 9

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Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ **The sequence is geometric and r = 1.03.**

$a_6 = a_1 r^5$

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$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ **The sequence is geometric and r = 1.03.**

$a_6 = a_1 r^5$

$a_6 =$

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Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow$ $a_1 = 38{,}000$

$\Rightarrow$ **The sequence is geometric and r = 1.03.**

$$a_6 = a_1 r^5$$

$$a_6 = 38{,}000(1.03)^5$$

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

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Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ **The sequence is geometric and r = 1.03.**

$a_6 = a_1 r^5$

$a_6 = 38{,}000(1.03)^5$

$a_6 \approx$

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

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Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ **The sequence is geometric and r = 1.03.**

$$a_6 = a_1 r^5$$

$$a_6 = 38{,}000(1.03)^5$$

$$a_6 \approx 44{,}052$$

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

8. A particular job has a starting salary of $38,000 per year with a guaranteed raise of 3% per year. What will be the salary for the 6th year?

Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow$ $a_1 = 38{,}000$

$\Rightarrow$ **The sequence is geometric and r = 1.03.**

$$a_6 = a_1 r^5$$

$$a_6 = 38{,}000(1.03)^5$$

$$a_6 \approx 44{,}052$$

The salary for the 6^{th} year will be about $44,052.

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

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Consider the sequence of numbers representing the salary for the job over a number of years.

$\Rightarrow a_1 = 38{,}000$

$\Rightarrow$ **The sequence is geometric and r = 1.03.**

$$a_6 = a_1 r^5$$

$$a_6 = 38{,}000(1.03)^5$$

$$a_6 \approx 44{,}052$$

The salary for the 6^{th} year will be about $44,052.

Algebra 2 Class Worksheet #3 Unit 9

Solve each of the following problems.

9. A ball is dropped onto a concrete floor from a height of 70 inches. On each bounce, the ball rebounds to 60% of its previous height. How high will the ball bounce after it hits the floor for the 4^{th} time?

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⇒ **The sequence is geometric**

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⟹ **The sequence is geometric and r = 0.6 .**

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⇒ **a_1 =**

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⟹ **The sequence is geometric and r = 0.6 .**

⟹ **a_1 = 60% of 70 = 0.6(70)** ⟹ **$a_1 = 42$**

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$a_4 = a_1 r^3 =$

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$$a_4 = a_1 r^3 = (42)(0.6)^3$$

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$$a_4 \approx 9.1$$

The ball will bounce up about 9.1 inches above the floor after it hits the floor for the 4^{th} time.

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