Algebra I Worksheet #6 Unit 1 Selected Solutions

Find the value of each expression.

1. $5(4 + 3) = \underline{35}$
$5 \cdot 7$

2. $5 \cdot 4 + 3 = \underline{23}$
$20 + 3$

3. $5 \cdot 4 + 5 \cdot 3 = \underline{35}$
$20 + 15$

7. $4(8 - 5) = \underline{12}$
$4 \cdot 3$

8. $4 \cdot 8 - 5 = \underline{27}$
$32 - 5$

9. $4 \cdot 8 - 4 \cdot 5 = \underline{12}$
$32 - 20$

Use the appropriate distributive law to write the expressions without parentheses. Don't have any 'double signs' in your final answers.

15. $-2(x + 4) = \underline{-2x - 8}$
$-2x + -8$

18. $-6(2y + 1) = \underline{-12y - 6}$
$-12y + -6$

Write each of the following without parentheses. Don't have any 'double signs' in your final answers.

21. $-(x + 2) = \underline{-x - 2}$
$-x + -2$

24. $-(x - 3) = \underline{-x + 3}$
$-(x + -3)$

Simplify each of the following.

27. $(4x + 5) - (x + 3) = \underline{3x + 2}$
$(4x + 5) + -(x + 3)$
$(4x + 5) + (-x + -3)$
$(4x + -1x) + (5 + -3)$

30. $(6x + 2) - (4x - 3) = \underline{2x + 5}$
$(6x + 2) + -(4x + -3)$
$(6x + 2) + (-4x + 3)$
$(6x + -4x) + (2 + 3)$

Simplify each of the following. Hint: Use the appropriate distributive property. Then combine like terms.

33. $2(x + 2) + 4(x + 3) = \underline{6x + 16}$
$(2x + 4) + (4x + 12)$
$(2x + 4x) + (4 + 12)$

36. $4(2y - 5) + 3(3y - 4) = \underline{17y - 32}$
$(8y - 20) + (9y - 12)$
$(8y + -20) + (9y + -12)$
$(8y + 9y) + (-20 + -12)$
$17y + -32$

39. $4(3x - 5) - 2(3x + 1) = \underline{6x - 22}$
$4(3x - 5) + -2(3x + 1)$
$(12x - 20) + (-6x + -2)$
$(12x + -20) + (-6x + -2)$
$(12x + -6x) + (-20 + -2)$
$6x + -22$