

11-30-17

Aim: SWBAT review.

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HW: Test tomorrow

AIM: SWBAT review simplifying expressions with rational numbers and factoring.

~~DO NOW:~~

~~Factor the following expressions, then evaluate each expression when $x = 2$ and $y = -3$.~~

~~1) $16 + 24x$~~

~~2) $15 - 35y$~~

~~3) $6y + 9xy$~~

CLASSWORK:

Simplify each expression.

1) $-5.2 + 8.41y - 1.3 + 4.75y$

$13.16y - 6.5$

2) $\frac{2}{3}x - \frac{1}{2} + \frac{1}{4}x - \frac{1}{7}$

$\frac{11}{12}x - \frac{9}{14}$

3) $\frac{1}{4}(12x - 24) - 8x - 15$

$3x - 6 - 8x - 15$

$-5x - 21$

4) $0.5(-60x - 8) + 47x - 16$

$-30x - 4 + 47x - 16$

$17x - 20$

5) $-15x - \frac{1}{7}(-42x + 70) - 3$

$-15x + 6x - 10 - 3$

$-9x - 13$

6) $-10x - \frac{2}{3}(-12x + 6) - 12$

$-10x + 8x - 4 - 12$

$-2x - 16$

2) The following expression is simplified below: $5(4m + n) - 2n$ * Justify each step*

$5(4m + n) - 2n$	The Original Expression
$20m + 5n - 2n$	<u>Distributive Property</u>
$20m + (5n - 2n)$	<u>Associative Property</u>
$20m + 3n$	<u>Combine Like Terms</u>

3) The following expression is simplified below: $7x - 2 + 7x + 6$ * Justify each step*

$7x - 2 + 7x + 6$	The Original Expression
$7x + 7x - 2 + 6$	<u>Commutative Property</u>
$(7x + 7x) - 2 + 6$	<u>Associative Property</u>
$14x - 2 + 6$	<u>Combine Like Terms</u>
$14x + (-2 + 6)$	<u>Associative Property</u>
$14x + 4$	<u>Combine Like Terms</u>

Simplify AND factor the given expression. This means, first you should simplify the expression. Then you should factor out the GCF to get your final answer.

4) $6x + 3x + 15y + 12y$

$9x + 27y$

$9(x + 3y)$

5) $8d - 2(3d - 4) + 2$

$8d - 6d + 8 + 2$

$2d + 10$

$2(d + 5)$

6) $-8(2a - 3b) - 5(6b - 4a)$

$+16a + 24b - 30b + 20a$

$4a - 6b$

$2(2a - 3b)$

7) $10(5g + 2h - 3) - 4(3g - 4h + 2)$

$50g + 20h - 30 - 12g + 16h - 8$

$38g + 36h - 38$

$2(19g + 18h - 19)$

8) $\frac{2}{6}x + 6 + \frac{1}{6}x - 2$

$\frac{1}{2}x + 4$

9) $\frac{1}{4}x - 10 + \frac{1}{2}x - 14$

$\frac{3}{4}x - 24$

Simplify and factor the given expression. This means, first you should simplify the expression. Then you should factor out the GCF to get your final answer.

$$7) \quad \boxed{6x} + \boxed{3x} + \boxed{15y} + \boxed{12y}$$

$$9x + 27y$$

$$9(x + 3y)$$

$$8) \quad 8d - 2(3d - 4) + 2$$

$$\boxed{8d} - \boxed{6d} + \boxed{8} + \boxed{2}$$

$$2d + 10$$

$$2(d + 5)$$

Add in order

9) Find the sum of $(9x - 2)$ and $(-4x - 3)$

Translate: $(9x - 2) + (-4x - 3)$

$$\text{Simplify: } \boxed{9x} - \boxed{2} - \boxed{4x} - \boxed{3}$$

$$5x - 5$$

Add in reverse order

10) Find the result when $(13m + 2)$ is added to $(4m - 14)$

Translate: $(4m - 14) + (13m + 2)$

$$\text{Simplify: } \boxed{4m} - \boxed{14} + \boxed{13m} + \boxed{2}$$

$$17m - 12$$

11) Find the difference of $(12x + 7)$ and $(15x + 8)$

Translate: $(12x + 7) - (15x + 8)$

$$\text{Simplify: } \boxed{12x} + \boxed{7} - \boxed{15x} - \boxed{8}$$

$$-3x - 1$$

**12) Find the result when $(2x + 4)$ is subtracted from $(10x - 9)$

Translate: $(10x - 9) - (2x + 4)$

$$\text{Simplify: } \boxed{10x} - \boxed{9} - \boxed{2x} - \boxed{4}$$

$$8x - 13$$