

11-28-17

Aim: SWBAT factor an expression to look like the Distributive Property.

HW: WS

Test Friday

Do Now: On WS

HOMEWORK - SIMPLIFY EXPRESSIONS WITH RATIONAL NUMBERS

Simplify each expression.

Any problems with fractions, your final answer needs to be A FRACTION IN SIMPLEST FORM!

1) $-5.31x + 8.3 - 4.2 - 8.07x$

$$-13.38x + 4.1$$

2) $-20.27x - 5.2 + 3.8 + 12.51x$

$$-7.76x - 1.4$$

3) $\frac{7}{10} - \frac{2}{5}x + 0.3 - \frac{1}{5}x$

$$-\frac{3}{5}x + 1$$

4) $\frac{9}{12}x - \frac{3}{8} + \frac{3}{8} - \frac{1}{3}x$

$$\frac{5}{12}x$$

5) $(0.4x + 0.3) + (\frac{1}{2} - \frac{4}{5}x)$

OR

$$-0.4x + 0.8$$

$$-\frac{2}{5}x + \frac{4}{5}$$

6) $(\frac{1}{9}x + \frac{1}{5}) - (\frac{2}{3}x - \frac{1}{7})$

$$-\frac{5}{9}x + \frac{12}{35}$$

HOMEWORK - SIMPLIFYING EXPRESSIONS WITH RATIONAL NUMBERS

Simplify each expression. $\frac{1}{8} = \div 8$

1) $15x + \frac{1}{8}(64x - 32) + 30$

$$\boxed{15x + 8x} - \boxed{4} + \boxed{30}$$

$$23x + 26$$

$$0.5 = \frac{1}{2} = \div 2$$

2) $0.5(28x + 30) + 13x + 31$

$$\boxed{14x} + \boxed{15} + \boxed{13x} + \boxed{31}$$

$$27x + 46$$

3) $20x + \frac{3}{10}(-70x + 100) + 57$ *div. by 10, then mult. by 3*

$$\boxed{20x} - \boxed{21x} + \boxed{30} + \boxed{57}$$

$$-x + 87$$

4) $\frac{1}{5}(25x + 50) - 7x + 21$ $\frac{1}{5} = \div 5$

$$\boxed{5x} + \boxed{10} - \boxed{7x} + \boxed{21}$$

$$-2x + 31$$

5) $-\frac{1}{4}(24x - 36) - 8x - 15$ $\frac{1}{4} = \div 4$

$$\boxed{-6x} + \boxed{9} - \boxed{8x} - \boxed{15}$$

$$-14x - 6$$

6) $0.3(2x + 7) - 5x + 3.1$

$$\boxed{0.6x} + \boxed{2.1} - \boxed{5x} + \boxed{3.1}$$

$$-4.4x + 5.2$$

7) $\frac{2}{3}(18x - 27) + 6x - 4$ *div. by 3, then mult. by 2*

$$\boxed{12x} - \boxed{18} + \boxed{6x} - \boxed{4}$$

$$18x - 22$$

8) $-5x + \frac{1}{6}(60x - 36) - 9$ $\frac{1}{6} = \div 6$

$$\boxed{-5x} + \boxed{10x} - \boxed{6} - \boxed{9}$$

$$5x - 15$$

GCF : the smallest of the original values or smaller than it.

Find the GCF.

10 and 45

$$\begin{array}{r} 10 \overline{)45} \quad \times \\ 5 \overline{)45} \end{array} \quad \textcircled{5}$$

12 and 52

$$12 \overline{)52} \quad \times \quad \textcircled{4}$$

$$6 \overline{)52} \quad \times$$

$$4 \overline{)52} \quad \checkmark$$

15 and 18

$$15 \overline{)18} \quad \times$$

$$5 \overline{)18} \quad \times$$

$$3 \overline{)18} \quad \checkmark$$

$$\textcircled{3}$$

Find the GCF.

x and x^2

x

y^2 and y^3

y^2

x^4 and x^2

x^2

x^2y and xy^2

xy

$x^2y^2z^2$ and xy^2z

xy^2z

$20xy$ and $4y$

$4y$

$125x^2y^2z^2$ and $25xyz$

$25xyz$

$25 \sqrt{125}$

Factor each expression. If the expression cannot be factored, write cannot be factored.
When you factor an expression, your final answer should look like the Distributive Property.

5) $15a + 25b$

6) $9x - 27xy$

7) $24y + 16$

8) $13x - 9y$

$$8(3y + 2)$$

GCF ↑

9) $25x - 100$

10) $8x + 12$

11) $18xy + 6y$

12) $4ab + 12a - 10$

$$25(x - 4)$$

$$4(2x + 3)$$

$$6y(3x + 1)$$

$$2(2ab + 6a - 5)$$

↑
GCF

13) $-6x + 12$

14) $7x - 15y$

15) $-9x + 24$

16) $6xy + 13xz$

17) $15a - 12$

18) $x - 8x$

19) $15a - 20b + 10c$

20) $12ab + 18ac$

21) $36x + 24$

22) $4x + 9$

23) $14x - 16y$

24) $18c - 30cd$

HOMEWORK - FACTORING

Find the *GCF* of each pair of terms.

1) n and $5n$

2) $12c$ and $24d$

3) $2a$ and 8

4) $14x$ and $21xy$

FACTOR each expression. If the expression cannot be factored, write cannot be factored. When you factor an expression, your final answer should look like the Distributive Property.

5) $n + 5n$

6) $12c - 24d$

7) $2a + 8$

8) $14x - 21xy$

9) $3a + 9ab$

10) $6d - 9cd$

11) $12x + 25y$

12) $24x + 30xy$

13) $30 + 42y$

14) $40x - 60$

15) $100xy + 75xyz$

16) $4x - 7$

SIMPLIFY each expression using the Distributive Property.

17) $3(-4x + 8)$

18) $\frac{1}{2}(6x + 14)$

19) $-4(4x - 5)$

20) $\frac{3}{5}(15x - 45)$