

Name: Key
DISCRETE

Date: 5/7/18
TROICI/GOSSE

Directions: Simplify the following expressions.

<p>1. $(2x + 5y) + (3x - 2y)$</p> $\boxed{5x + 3y}$	<p>2. $(x + \beta) + (x - \beta)$</p> $\boxed{2x}$
<p>3. $(3x^3 + 3x^2 - 4x + 5) + (x^2 - 2x^2 + x - 4)$</p> $\boxed{3x^3 + 2x^2 - 3x + 1}$	<p>4. $(x^2 - 4) - (x^2 + 3x - 3)$</p> $x^2 - 4 - x^2 - 3x + 3$ $\boxed{-3x - 1}$

How do we translate and simplify the following expressions?

ADD

SUBTRACT

<p>5. What is the <u>sum</u> of $(7x^2 - x - 4)$, $(x^2 - 2x - 3)$, and $(-2x^2 + 3x + 5)$?</p> $6x^2 + 0x - 2$ $\boxed{6x^2 - 2}$	<p>6. Find the <u>difference</u> between $(x^3 + 9x - 5)$ and $(-4x^2 - 12x - 5)$.</p> $\begin{array}{r} (x^3 + 9x - 5) \\ + 4x^2 + 12x + 5 \\ \hline \end{array}$ $\boxed{5x^2 + 21x}$
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Try the following examples on your own:

<p>7. $(6x^3 - 2x^2 + 8x) - (4x^3 - 11x + 10)$</p> $6x^3 - 2x^2 + 8x - 4x^3 + 11x - 10$ $\boxed{2x^3 - 2x^2 + 19x - 10}$	<p>8. $(16x^2 + 2) - (10x^2 - 8) + (3x^2 - 4)$</p> $16x^2 + 2 - 10x^2 + 8 + 3x^2 - 4$ $\boxed{9x^2 + 6}$
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Directions: Solve for the missing variable in each of the follow questions.

$$\begin{array}{r} 1) d + 59 = 119 \\ -59 \quad -59 \\ \hline \boxed{d = 60} \end{array}$$

$$\begin{array}{r} 2) 93 = 86 + y \\ -86 \quad -86 \\ \hline \boxed{y = 7} \end{array}$$

$$\begin{array}{r} 3) 7p = 35 \\ \frac{7}{7} \quad \frac{7}{7} \\ \hline \boxed{p = 5} \end{array}$$

$$\begin{array}{r} 4) \frac{c}{2} = 7 \cdot 2 \\ \hline \boxed{c = 14} \end{array}$$

Try the following examples on your own:

$$\begin{array}{r} 5) x + 3.4 = 9.1 \\ -3.4 \quad -3.4 \\ \hline \boxed{x = 5.7} \end{array}$$

$$\begin{array}{r} 6) \frac{-49}{7} = \frac{7y}{7} \\ \hline \boxed{y = -7} \end{array}$$

$$\begin{array}{r} 7) p - \frac{1}{3} = \frac{2}{3} \\ +\frac{1}{3} \quad +\frac{1}{3} \\ \hline \boxed{p = \frac{3}{3} = 1} \end{array}$$

$$\begin{array}{r} 8) 3 \cdot \frac{v}{-3} = -6 \cdot -3 \\ \hline \boxed{v = 18} \end{array}$$

Directions: Simplify the following equations before solving for the missing variable.

<p>1) $-11x + 3x - 91 = 69$</p> $\begin{array}{r} -8x - 91 = 69 \\ + 91 + 91 \\ \hline -8x = 160 \\ \boxed{x = -20} \end{array}$	<p>2) $10 = 4x - 19 - 5x$</p> $\begin{array}{r} 10 = -1x - 19 \\ + 19 + 19 \\ \hline 29 = -1x \\ \frac{29}{-1} = \frac{-1x}{-1} \\ \boxed{x = -29} \end{array}$	<p>3) $33 = -6x - x - 65$</p> $\begin{array}{r} 33 = -7x - 65 \\ + 65 + 65 \\ \hline 98 = -7x \\ \frac{98}{-7} = \frac{-7x}{-7} \\ \boxed{14 = x} \end{array}$
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Practice:

<p>4) $-150 - 6x - 5x = 114$</p> $\begin{array}{r} -150 - 11x = 114 \\ + 150 + 150 \\ \hline -11x = 264 \\ \frac{-11x}{-11} = \frac{264}{-11} \\ \boxed{x = 24} \end{array}$	<p>5) $103 = -7x - 92 - 8x$</p> $\begin{array}{r} 103 = -15x - 92 \\ + 92 + 92 \\ \hline 195 = -15x \\ \frac{195}{-15} = \frac{-15x}{-15} \\ \boxed{x = -13} \end{array}$	<p>6) $149 = -98 - 4x - 9x$</p> $\begin{array}{r} 149 = -13x - 98 \\ + 98 + 98 \\ \hline 247 = -13x \\ \frac{247}{-13} = \frac{-13x}{-13} \\ \boxed{x = -19} \end{array}$
<p>7) $-125 - 10x - 7x = 79$</p> $\begin{array}{r} -125 - 17x = 79 \\ + 125 + 125 \\ \hline -17x = 204 \\ \frac{-17x}{-17} = \frac{204}{-17} \\ \boxed{x = -12} \end{array}$	<p>8) $4x - 2x - 28 = 18$</p> $\begin{array}{r} 2x - 28 = 18 \\ + 28 + 28 \\ \hline 2x = 46 \\ \frac{2x}{2} = \frac{46}{2} \\ \boxed{x = 23} \end{array}$	<p>9) $32 = 5x - 64 - x$</p> $\begin{array}{r} 32 = 4x - 64 \\ + 64 + 64 \\ \hline 96 = 4x \\ \frac{96}{4} = \frac{4x}{4} \\ \boxed{x = 24} \end{array}$