

## Do Now

Solve the following (Check if necessary)

$$1) -5(3g + 9) = -3(5g - 12)$$

$$\begin{array}{rcl} -15g - 45 & = & -15g + 36 \\ +15g & & +15g \\ \hline -45 & \neq & 36 \end{array}$$

No Solution  $\emptyset$

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## Homework Answers

1)  $x = 0$

2) No solution  $\emptyset$

3) All Real Numbers  $\mathbb{R}$

4)  $k = -3$

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## TRANSLATING EQUATIONS

What are some words used to represent an equation?

\* equals

Sum/difference/

\* is

result

equivalent

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## TRANSLATING EQUATIONS

When translating sentences into equations:

- 1) Identify the numbers being used in the equation
- 2) Write a "let" statement to represent the variable  
*Let  $x = \text{a number}$*
- 3) Identify the operations being done
- 4) Figure out where the equals sign goes in the equation
- 5) Solve the equation (and check!!!)

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**TRANSLATING EQUATIONS**

- 1) The <sup>+</sup>sum of a number and 13 is 31. Find the number.

Let  $x = \text{a number}$

$$\begin{array}{r} x + 13 = 31 \\ -13 \quad -13 \\ \hline x = 18 \end{array}$$

ck

$$\begin{array}{l} x + 13 = 31 \\ (18) + 13 = 31 \\ 31 = 31 \checkmark \end{array}$$

- 2) If eight less than a number equals -16 what is the number?

Let  $n = \text{a number}$

$$\begin{array}{r} n - 8 = -16 \\ +8 \quad +8 \\ \hline n = -8 \end{array}$$

ck

$$\begin{array}{l} n - 8 = -16 \\ (-8) - 8 = -16 \\ -16 = -16 \checkmark \end{array}$$

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**TRANSLATING EQUATIONS**

- 3) If 12 equals a number decreased by eight, what is that number?

- 4) Three minus a number divided by four is -1, find the number.

- 5) If 12 is subtracted from half a number, the result is 4. Find the number.

Let  $n = \text{a number}$

$$\begin{array}{r} \frac{1}{2}n - 12 = 4 \\ +12 \quad +12 \\ \hline \frac{1}{2}n = 16 \left( \frac{2}{2} \right) \\ n = 32 \end{array}$$

ck

$$\begin{array}{l} \frac{1}{2}n - 12 = 4 \\ \frac{1}{2}(32) - 12 = 4 \\ 16 - 12 = 4 \\ 4 = 4 \checkmark \end{array}$$

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