

**Geometry 9/19**

**Warm Up IXL**

**6th Grade**

**Z.10**

# 0-5 Linear Equations

I can use algebra to solve linear equations

Mathematics requires “rules of the road;” without them we would all be getting difference answers. It’s called Order of Operations.

## The Rules:

1. Calculate within the innermost grouping symbols,  $( )$ ,  $[ ]$ ,  $\{ \}$ ,  $|$ , and above or below fraction bars.
2. Simplify all exponential expressions.
3. Perform all multiplication and division, working from left to right.
4. Perform all addition and subtraction, working from left to right.

When solving linear equation we follow these rules just in reverse order

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Ex. 1 Solve each equation

A.  $m + 12 = -5$   
 $\quad -12 \quad -12$   

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 $m = -17$

C.  $\frac{4d}{4} = \frac{36}{4}$   

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 $d = 9$

B.  $x - 7 = 16$   
 $\quad +7 \quad +7$   

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 $x = 23$

D.  $\frac{-8t}{8} = \frac{-7}{8}$   

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 $t = 56$

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Ex. 2 Solve each equation

$$\begin{array}{r} \text{A. } 8q - 15 = 49 \\ +15 \quad +15 \\ \hline 8q = 64 \\ \hline 8 \quad 8 \\ \hline \boxed{q = 8} \end{array}$$

$$\begin{array}{r} \text{B. } 12y + 8 = 6y - 5 \\ -6y \quad -6y \\ \hline 6y + 8 = -5 \\ \hline -8 \quad -8 \\ \hline 6y = -13 \\ \hline 6 \quad 6 \\ \hline \boxed{y = -\frac{13}{6}} \end{array}$$

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Ex. 3 Solve  $3(x - 5) = 13$

$$\begin{array}{r} 3x - 15 = 13 \\ +15 \quad +15 \\ \hline \end{array}$$

$$\frac{3x}{3} = \frac{28}{3}$$

$$x = \frac{28}{3}$$

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