

The following must be completed:

1. Unit 5 Polynomial Test
2. "Get Set" Worksheet [must be done during class time/ Flex]
3. Start Unit 6

# ***Chapter 6***

## ***Linear Equations***

## ***and Inequalities***



$$2x + 2 = 16$$

$$2x + 2 > 16$$

# How to fix a ~~flat~~ spare tire...

1. Place jack under bumper.

~~Remove a tire..~~  
Put on

2. Loosen nuts.



3. Raise

4. Remove nuts

5. Remove flat tire.

2x

## To solve equations we need to undo operations.

→ opposite

- Inverse operations reverse each other's results.



- Addition and subtraction are inverse operations



- Multiplication and division are also inverse operations

$$\begin{array}{r} 2(7) + 2 \\ 14 + 2 \\ 16 \end{array}$$

$$\begin{array}{r} 2x + 2 = 16 \\ 2x + 2 - 2 = 16 - 2 \end{array}$$

$$\begin{array}{r} \cancel{2}x = \frac{14}{\cancel{2}} \\ x = 7 \end{array}$$

Let's Look at a Basic Equation to remind you how this works...

Undo the operation



$$\text{a) } \frac{3x}{3} = \frac{27}{3}$$

$$x = 9$$

Solve

$$\text{b) } x - 4 = 10$$

$$x \boxed{-4+4} = 10+4$$

$$x = 14$$

A.  $-27.25 = c + 2.25$

$$c + 2.25 = -27.25$$

$$c + 2.25 - 2.25 = -27.25 - 2.25$$

$$c = -29.5$$

C.  $-76.05 = -9b$

$$\frac{-9b}{-9} = \frac{-76.05}{-9}$$

$$b = 8.45$$



B.  $\frac{3x}{3} = \frac{15.6}{3}$

$$x = 5.2$$

D.  $\frac{w}{4.5} = -3.5$

$$\frac{w(4.5)}{4.5} = \frac{-3.5(4.5)}{4.5}$$

$$w = -15.75$$

$$e) \quad \frac{d}{7} - 3 = 11$$

$$\frac{d}{7} \boxed{-3+3} = 11 + 3$$

$$(b) \frac{d}{7} = 14 (7)$$

$$d = 98$$

$$g) \quad 3.1 - 0.2a = 1.5$$

$$\boxed{3.1 - 3.1} - 0.2a = 1.5 - 3.1$$

$$\frac{-0.2a}{-0.2} = \frac{-1.6}{-0.2}$$

$$a = 8$$



$$f) \quad -16 = \frac{p}{6} + 2$$

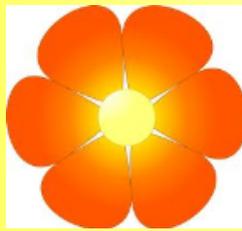
$$\frac{p}{6} + 2 = -16$$

$$\frac{p}{6} \boxed{+2-2} = -16 - 2$$

$$(b) \frac{p}{6} = -18 (6)$$

$$p = -108$$

Remember the distributive property...



$$a) -2(2-x) = -6$$

$$-4 + 2x = -6$$

$$\boxed{-4+4} + 2x = -6 + 4$$

$$\frac{2x}{2} = \frac{-2}{2}$$

$$x = -1$$

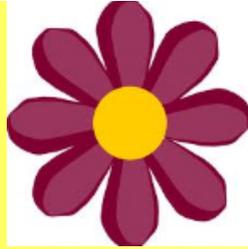
$$b) 3.2(v-3) = 12.8$$

$$3.2v - 9.6 = 12.8$$

$$3.2v \boxed{-9.6+9.6} : 12.8+9.6$$

$$\frac{3.2v}{3.2} = \frac{22.4}{3.2}$$

$$v = 7$$



$$c) -5(n+1) = -25$$

$$-5n - 5 = -25$$

$$-5n \boxed{-5+5} = -25 + 5$$

$$\frac{-5n}{-5} = \frac{-20}{-5}$$

$$n = 4$$

Homework...  
Really?



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#8 a, c, e

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#10 a, c, e

#18

a, c, e

Worksheet

Even questions only