

## TUESDAY, NOVEMBER 20, 2012

Agenda:

- TISK Problems, No MM
- Lesson 10-5: Solving for a Variable
- Homework: p. 521 #23-29 odd & 34-36 all

TISK Problems

- 1) Simplify:  $-23 - 15$
- 2) Solve for  $x$ :  $5x - 25 = 0$
- 3) What is the probability of rolling doubles on a pair of six-sided dice?

## Homework Check

- 1) Solve  $\ell_1 + \ell_2 + \ell_3 = P$  for  $\ell_2$

$$\begin{array}{r} -\ell_1 \quad -\ell_3 \quad -\ell_1 - \ell_3 \\ \hline \ell_2 = P - \ell_1 - \ell_3 \end{array}$$

## Homework Check

2. Solve  $\ell_1 + \ell_2 + \ell_3 = P$  for  $\ell_1$

$$\begin{array}{r} -\ell_2 - \ell_3 \quad -\ell_2 - \ell_3 \\ \hline \ell_1 = P - \ell_2 - \ell_3 \end{array}$$

### Homework Check

3. Solve  $A - B + 2 = C$  for A.

$$\begin{array}{r} +B -2 \quad +B -2 \\ \hline A = C + B - 2 \end{array}$$

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### Homework Check

4. Solve  $A - B + 2 = C$  for B.

$$\begin{array}{r} +B \quad +B \\ \hline A + 2 = B + C \\ -C \quad -C \\ \hline A - C + 2 = B \end{array}$$

When the variable you're solving for is negative, add it to both sides of the equation to start.

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### Homework Check

5. Solve  $A = \frac{1}{2}d_1d_2$  for  $d_1$ .

$$\begin{array}{r} 2A = d_1d_2 \\ \frac{2A}{d_2} = d_1 \end{array}$$

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## Homework Check

6. Solve
- $a^2 + b^2 = c^2$
- for
- $b$
- .

$$\begin{array}{r} -a^2 \\ -a^2 \\ \hline b^2 = c^2 - a^2 \\ \sqrt{b^2} = \sqrt{c^2 - a^2} \end{array}$$

$\sqrt{\quad}$  is the inverse operation of Squaring, therefore it is the same step in the order of operations.

$$\boxed{b = \pm \sqrt{c^2 - a^2}}$$

When I introduce the  $\sqrt{\quad}$  I must include both  $\pm$  answers!

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## Homework Check

7. Solve
- $S = \frac{(n-2)180}{180}$
- for
- $n$
- .

$$\begin{array}{r} \frac{S}{180} = \frac{n-2}{180} \\ \frac{S}{180} = n-2 \\ \frac{S}{180} + 2 = n \end{array}$$

$$\boxed{\frac{S}{180} + 2 = n}$$

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## Homework Check

8. Solve
- $F = \frac{9}{5}C + 32$
- for
- $C$
- .

$$\begin{array}{r} -32 \\ -32 \\ \hline \frac{5}{9}(F-32) = \left(\frac{9}{5}C\right)\frac{5}{9} \\ \hline \frac{5}{9}(F-32) = C \end{array}$$

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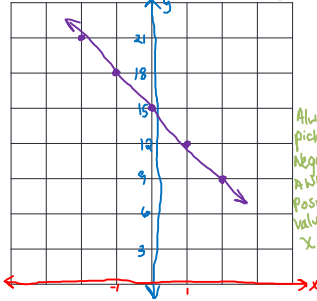
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## Homework Check

9. Solve  $y + 3x = 15$  for  $y$  and graph.



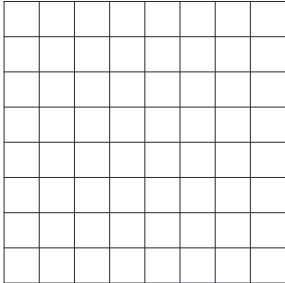
$$\begin{array}{r} y + 3x = 15 \\ -3x \quad -3x \\ \hline y = -3x + 15 \end{array}$$

Always  
pick  
negative  
AND  
positive  
values for  
 $x$ !

| $x$ | $y$ |
|-----|-----|
| -2  | 21  |
| -1  | 18  |
| 0   | 15  |
| 1   | 12  |
| 2   | 9   |

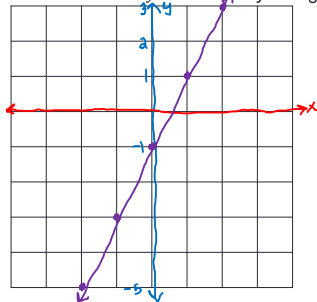
## Homework Check

10. Solve  $2y - 9x = 14$  for  $y$  and graph.



## Homework Check

11. Solve  $6x - 3y - 3 = 0$  for  $y$  and graph.



$$\begin{array}{r} 6x - 3y - 3 = 0 \\ +3y \quad +3y \\ \hline 6x - 3 = 3y \\ \frac{6x - 3}{3} = \frac{3y}{3} \end{array}$$

$$2x - 1 = y$$

| $x$ | $y$ |
|-----|-----|
| -2  | -5  |
| -1  | -3  |
| 0   | -1  |
| 1   | 1   |
| 2   | 3   |

## §10-5 Solving for a Variable

- Treat all the other variables like numbers.
- Isolate the variable you're solving for.

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