Solutions to Warmup 3

Solve the following equations:

1.

$$\begin{aligned} 3(a-2) &= 15 \\ 3a - 6 &= 15 \\ 3a &= 21 \\ a &= 7 \end{aligned}$$

2.

$$\begin{aligned} 3x &= 10 - 2x \\ 5x &= 10 \\ x &= 2 \end{aligned}$$

3.

$$|7 - 3| = |4| = 4$$

4.

$$|7 + 3| = |10| = 10$$

5.

$$\begin{aligned} |8x - 4| &= 12 \\ 8x - 4 &= 12 \text{ or } 8x - 4 = -12 \\ 8x &= 16 \text{ or } 8x = -8 \\ x &= 2 \text{ or } x = -1 \end{aligned}$$

Note: We hope you went back and checked your solutions for 1, 2, and 5!

Find the equation of the line through (3,0) and (6,3)

6. slope $= 1$ (See Warmup 2)

$x_1 = 3, y_1 = 0$

$y = mx + b$

$0 = 3 + b$

$b = -3$

$y = x - 3$

Check your answer using the other point (6,3):

$x_2 = 6, y_2 = 3$

$3 = 6 - 3$? Yes! Our equation is correct.