

## Week 8

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**Solve each proportion.**

1)  $\frac{x-2}{7} = \frac{x}{2}$

**Simplify. Your answer should contain only positive exponents.**

2)  $m^2 n^3 \cdot -3nm^2$

3)  $(2y^{-3})^{-3}$

4)  $-\frac{y}{3yx^{-1}}$

**Simplify. Use absolute value signs when necessary.**

5)  $\sqrt{32x}$

**Simplify.**

6)  $2\sqrt{3} - 3\sqrt{3}$

7)  $3\sqrt{10} \cdot \sqrt{6}$

8)  $-5\sqrt{15}(\sqrt{5} + 3\sqrt{3})$

9)  $\frac{5\sqrt{5}}{\sqrt{45}}$

$$10) \frac{\sqrt{2}}{2 - 3\sqrt{3}}$$

**Solve each equation.**

$$11) 10|n - 9| = 40$$

**Solve each equation by factoring.**

$$12) b^2 + 10b + 21 = 0$$

**Factor each completely.**

$$13) p^2 + 7p - 8$$

$$14) 3n^2 + 17n - 90$$

**Solve each equation by completing the square.**

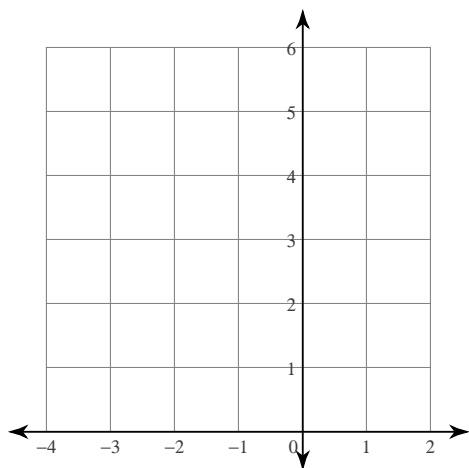
$$15) 8v^2 - 16v - 10 = 0$$

**Solve each equation with the quadratic formula.**

$$16) 10x^2 + 12x - 8 = 0$$

Sketch the graph of each function.

17)  $y = x^2 + 2x + 2$

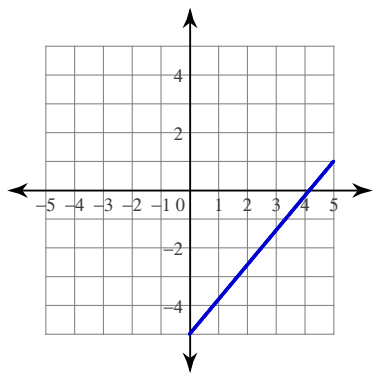


Solve each system by substitution.

18)  $-8x + 8y = 16$   
 $x + 6y = -16$

Write the slope-intercept form of the equation of each line.

19)



Find the slope of the line through each pair of points.

20)  $(-3, 1), (-12, 1)$

## Answers to Week 8 (ID: 1)

1)  $\{-0.8\}$

2)  $-3m^4n^4$

3)  $\frac{y^9}{8}$

4)  $-\frac{x}{3}$

5)  $4\sqrt{2x}$

6)  $-\sqrt{3}$

7)  $6\sqrt{15}$

8)  $-25\sqrt{3} - 45\sqrt{5}$

9)  $\frac{5}{3}$

10)  $\frac{-2\sqrt{2} - 3\sqrt{6}}{23}$

11)  $\{13, 5\}$

12)  $\{-3, -7\}$

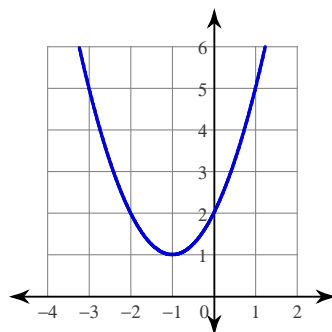
13)  $(p+8)(p-1)$

14)  $(3n-10)(n+9)$

15)  $\left\{2\frac{1}{2}, -\frac{1}{2}\right\}$

16)  $\left\{\frac{-3 + \sqrt{29}}{5}, \frac{-3 - \sqrt{29}}{5}\right\}$

17)



18)  $(-4, -2)$

19)  $y = \frac{6}{5}x - 5$

20) 0