

## Week 10

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**Solve each proportion.**

1)  $\frac{a}{3} = \frac{a-6}{8}$

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

2)  $2n^3 \cdot 2m^4 n^{-1}$

3)  $(-2x^3 y^3)^3$

4)  $-\frac{4y^2}{2x^0 y^0}$

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

5)  $\sqrt{392n}$

**Simplify.**

6)  $3\sqrt{5} + 3\sqrt{5}$

7)  $-5\sqrt{20} \cdot -2\sqrt{5}$

8)  $5\sqrt{6}(5 + \sqrt{6})$

9)  $\frac{4\sqrt{20}}{4\sqrt{4}}$

10)  $\frac{4}{5 - \sqrt{5}}$

**Solve each equation.**

11)  $8 \left| \frac{r}{6} \right| = 8$

**Solve each equation by factoring.**

12)  $x^2 - 3x + 2 = 0$

**Factor each completely.**

13)  $p^2 + 8p + 12$

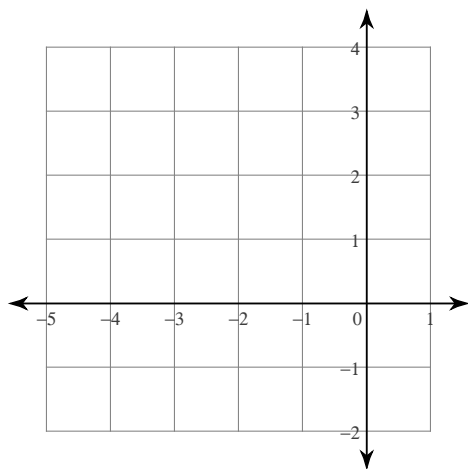
14)  $7x^2 - 37x - 30$

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

15)  $x^2 + 12x - 64 = 0$

**Sketch the graph of each function.**

16)  $y = x^2 + 6x + 8$

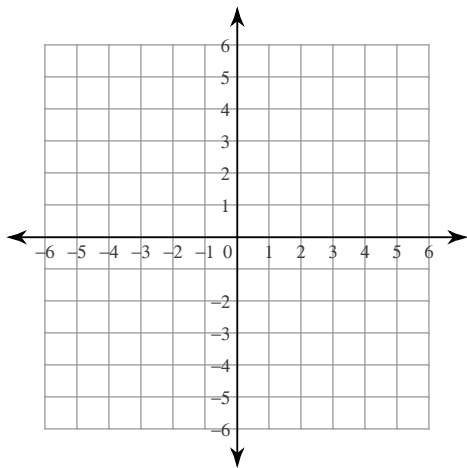


**Solve each system by substitution.**

$$\begin{aligned} 17) \quad & 2x - 2y = -10 \\ & x - 4y = -17 \end{aligned}$$

**Sketch the graph of each line.**

$$18) \quad 4y - 4 = -3x$$



**Write the standard form of the equation of the line through the given point with the given slope.**

$$19) \text{ through: } (-5, 0), \text{ slope} = -\frac{1}{5}$$

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

$$20) \quad x^2 - 10x + 23 = 7$$

## Answers to Week 10 (ID: 1)

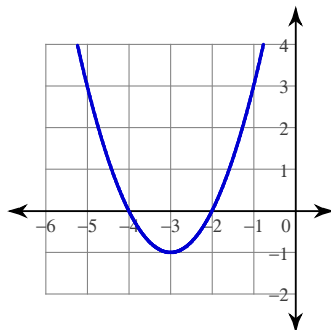
1)  $\{-3.6\}$

5)  $14\sqrt{2n}$

9)  $\sqrt{5}$

13)  $(p+2)(p+6)$

16)



19)  $x + 5y = -5$

2)  $4m^4n^2$

6)  $6\sqrt{5}$

10)  $\frac{5 + \sqrt{5}}{5}$

14)  $(7x+5)(x-6)$

17)  $(-1, 4)$

20)  $\{8, 2\}$

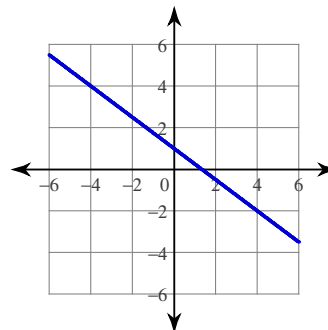
3)  $-8x^9y^9$

7) 100

11)  $\{6, -6\}$

15)  $\{4, -16\}$

18)



4)  $-2y^2$

8)  $25\sqrt{6} + 30$

12)  $\{2, 1\}$