

## Week 5

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**Solve each proportion.**

1)  $\frac{5}{6} = \frac{v+5}{v}$

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

2)  $y^3 \cdot 4x^{-3}y^2$

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

4)  $-\frac{4y^2}{3x^2}$

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

5)  $\sqrt{64k^3}$

**Simplify.**

6)  $-\sqrt{24} + 2\sqrt{24}$

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

8)  $\sqrt{6}(5\sqrt{3} + \sqrt{10})$

9)  $\frac{\sqrt{15}}{5\sqrt{80}}$

10)  $\frac{5}{4\sqrt{2} + \sqrt{3}}$

**Solve each equation.**

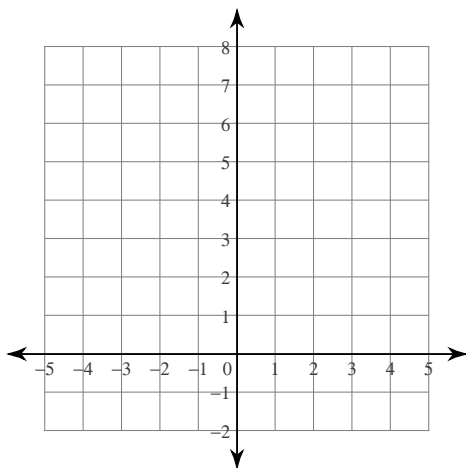
11)  $|x + 10| + 6 = 24$

**Solve each equation by factoring.**

12)  $b^2 + 10b + 16 = 0$

**Sketch the graph of each function.**

13)  $f(x) = 2(x + 1)^2 - 1$



**Solve each system by elimination.**

14)  $9x - 12y = -18$   
 $4x - 6y = -6$

**Write the standard form of the equation of each line given the slope and y-intercept.**

15) Slope = 2, y-intercept = -1

**Factor each completely.**

16)  $6x^2 - 30x - 36$

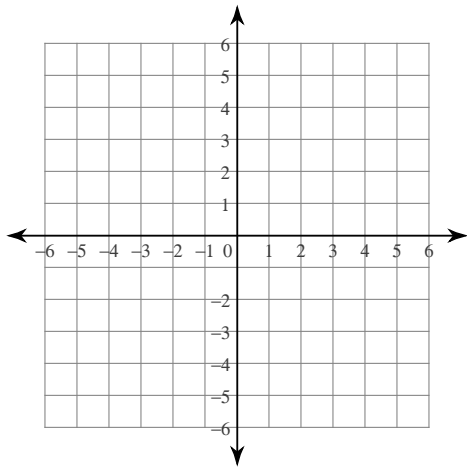
17)  $5v^2 - 53v + 30$

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

18)  $7x^2 - 14x - 56 = 0$

**Sketch the graph of each line.**

19)  $3x + y = -1$



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

20)  $3k^2 + 11k - 60 = 0$

## Answers to Week 5 (ID: 1)

1)  $\{-30\}$

2)  $\frac{4y^5}{x^3}$

3)  $16m^6n^6$

4)  $-\frac{4y^2}{3x^2}$

5)  $8|k|\sqrt{k}$

6)  $2\sqrt{6}$

7) 18

8)  $15\sqrt{2} + 2\sqrt{15}$

9)  $\frac{\sqrt{3}}{20}$

10)  $\frac{20\sqrt{2} - 5\sqrt{3}}{29}$

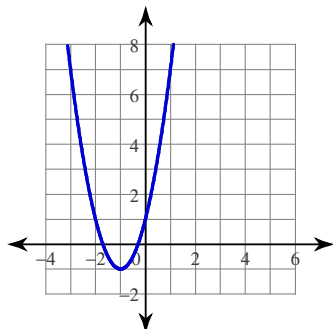
11)  $\{8, -28\}$

12)  $\{-2, -8\}$

13)

14)  $(-6, -3)$

15)  $2x - y = 1$



16)  $6(x - 6)(x + 1)$

17)  $(5v - 3)(v - 10)$

18)  $\{4, -2\}$

19)

20)  $\left\{3, -6\frac{2}{3}\right\}$

