

Week 7

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Solve each proportion.

1) $\frac{a-3}{a} = \frac{7}{3}$

Simplify. Your answer should contain only positive exponents.

2) $3xy^3 \cdot 4yx^{-3}$

3) $(-u^2v^2)^3$

4) $\frac{4x^{-3}}{3xy^0}$

Simplify. Use absolute value signs when necessary.

5) $\sqrt{384n^3}$

Simplify.

6) $2\sqrt{18} - 2\sqrt{8}$

7) $\sqrt{2} \cdot \sqrt{2}$

8) $-4\sqrt{3}(\sqrt{3} + 5)$

9) $\frac{\sqrt{25}}{4\sqrt{4}}$

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

Solve each equation.

$$11) |-5v| + 5 = 10$$

Solve each equation by factoring.

$$12) x^2 - 15x + 56 = 0$$

Solve each system by elimination.

$$13) \begin{array}{l} -10x - y = 14 \\ 5x - 4y = 11 \end{array}$$

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

$$14) \text{ Slope} = -\frac{1}{3}, \text{ y-intercept} = 4$$

Factor each completely.

$$15) 5x^2 - 20x - 160$$

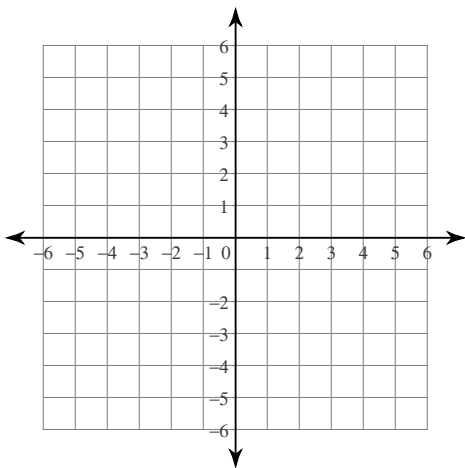
$$16) 7n^2 + 46n + 24$$

Solve each equation by completing the square.

$$17) 10x^2 - 20x - 80 = 0$$

Sketch the graph of each line.

18) $3x + 4y = 16$

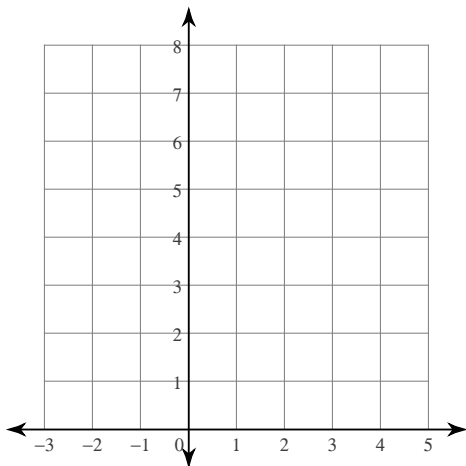


Solve each equation with the quadratic formula.

19) $3k^2 - 7k - 66 = 0$

Sketch the graph of each function.

20) $y = x^2 - 2x + 4$



Answers to Week 7 (ID: 1)

1) $\{-2.25\}$

2) $\frac{12y^4}{x^2}$

3) $-u^6v^6$

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

5) $8|n|\sqrt{6n}$

6) $2\sqrt{2}$

7) 2

8) $-12 - 20\sqrt{3}$

9) $\frac{5}{8}$

10) $\frac{20 + 5\sqrt{3}}{13}$

11) $\{-1, 1\}$

12) $\{8, 7\}$

13) $(-1, -4)$

14) $x + 3y = 12$

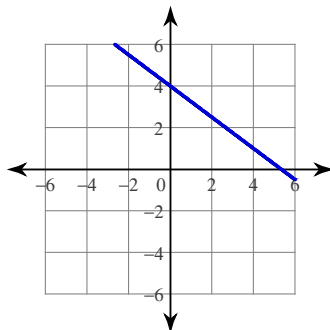
15) $5(x + 4)(x - 8)$

16) $(7n + 4)(n + 6)$

17) $\{4, -2\}$

18)

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



20)

