

Week 1

© 2012 Kuta Software LLC. All rights reserved.

Solve each proportion.

1) $\frac{5}{6} = \frac{x-4}{x}$

Simplify. Your answer should contain only positive exponents.

2) $-4y \cdot xy^4 \cdot -4xy^{-2}$

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

4) $-\frac{x^{-2}y^0}{3x^4y^{-1}}$

Simplify. Use absolute value signs when necessary.

5) $\sqrt{36n}$

Simplify.

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

7) $\sqrt{15} \cdot -\sqrt{8}$

8) $2\sqrt{15}(\sqrt{6} + 3)$

9) $\frac{\sqrt{20}}{4\sqrt{125}}$

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

Solve each system by elimination.

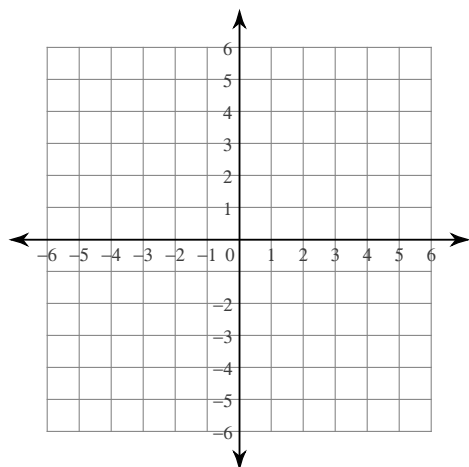
11) $7x - 5y = -8$
 $-10x - 2y = -16$

Write the slope-intercept form of the equation of the line through the given points.

12) through: $(-2, -4)$ and $(-3, 0)$

Sketch the graph of each line.

13) x-intercept = -3 , y-intercept = 3



Solve each equation.

14) $|b - 9| - 7 = -2$

Solve each equation by completing the square.

15) $r^2 - 18r = 66$

Solve each equation with the quadratic formula.

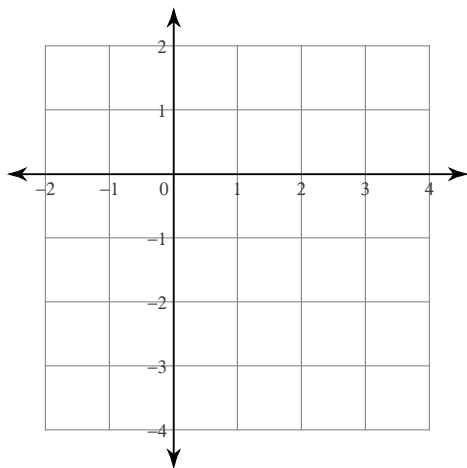
16) $4x^2 - 2x = 20$

Solve each equation by factoring.

17) $n^2 + 4n - 21 = 0$

Sketch the graph of each function.

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



Factor each completely.

19) $5n^2 - 80n + 300$

20) $4b^2 - 16b$

Answers to Week 1 (ID: 1)

1) $\{24\}$

2) $16x^2y^3$

3) $-\frac{64m^{12}}{n^6}$

4) $-\frac{y}{3x^6}$

5) $6\sqrt{n}$

6) $-4\sqrt{6}$

7) $-2\sqrt{30}$

8) $6\sqrt{10} + 6\sqrt{15}$

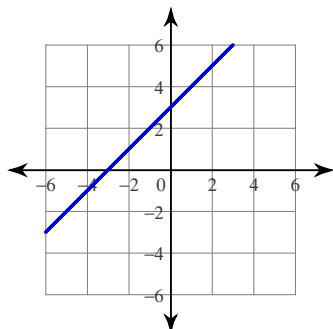
9) $\frac{1}{10}$

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

11) $(1, 3)$

12) $y = -4x - 12$

13)



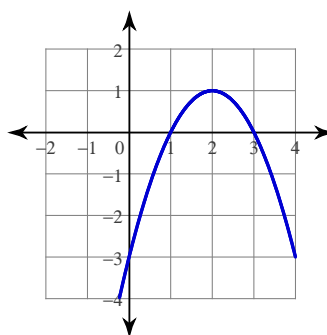
14) $\{14, 4\}$

15) $\{21.124, -3.124\}$

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

17) $\{3, -7\}$

18)



19) $5(n - 6)(n - 10)$

20) $4b(b - 4)$