

Week 3

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Solve each proportion.

1) $\frac{r-2}{4} = \frac{r}{6}$

Simplify. Your answer should contain only positive exponents.

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

3) $(-2m^3n^{-2})^{-1}$

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

Simplify. Use absolute value signs when necessary.

5) $\sqrt{256v^2}$

Simplify.

6) $3\sqrt{3} - \sqrt{12}$

7) $\sqrt{20} \cdot \sqrt{25}$

8) $\sqrt{2}(5\sqrt{2} + \sqrt{10})$

9) $\frac{3\sqrt{2}}{\sqrt{32}}$

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

Solve each equation.

11) $|-6x| + 6 = 18$

Solve each equation by completing the square.

12) $n^2 - 93 = 16n$

Solve each equation with the quadratic formula.

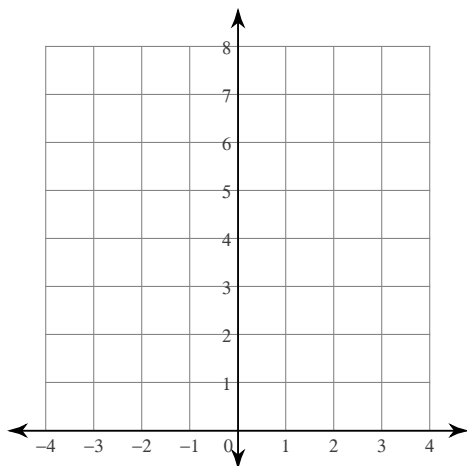
13) $12m^2 = 13$

Solve each equation by factoring.

14) $r^2 - 6r - 7 = 0$

Sketch the graph of each function.

15) $f(x) = (x + 2)^2 + 3$



Factor each completely.

16) $n^2 + 2n$

17) $2x^2 + 20x + 50$

Solve each system by substitution.

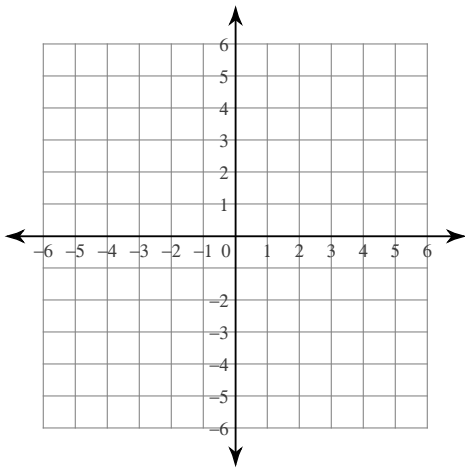
18) $2x + 7y = 16$
 $x + 4y = 9$

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

19) through: $(-2, 0)$, perp. to $y = -2x + 2$

Sketch the graph of each line.

20) $y = x - 4$



Answers to Week 3 (ID: 1)

1) $\{6\}$

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

3) $-\frac{n^2}{2m^3}$

4) $-x^5y^3$

5) $16|v|$

6) $\sqrt{3}$

7) $10\sqrt{5}$

8) $10 + 2\sqrt{5}$

9) $\frac{3}{4}$

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

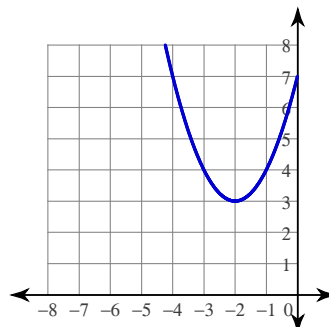
11) $\{-2, 2\}$

12) $\{20.53, -4.53\}$

13) $\left\{\frac{\sqrt{39}}{6}, -\frac{\sqrt{39}}{6}\right\}$

14) $\{-1, 7\}$

15)



16) $n(n + 2)$

17) $2(x + 5)^2$

18) $(1, 2)$

19) $y = \frac{1}{2}x + 1$

20)

