

Week 9

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Solve each proportion.

1) $\frac{3}{n-6} = \frac{2}{n}$

Simplify. Your answer should contain only positive exponents.

2) $-2yx^4 \cdot 4x^{-4}y^{-1}$

3) $(2a^3)^2$

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

Simplify. Use absolute value signs when necessary.

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

Simplify.

6) $-2\sqrt{3} - 3\sqrt{27}$

7) $\sqrt{3} \cdot 3\sqrt{2}$

8) $4\sqrt{10}(\sqrt{6} + \sqrt{2})$

9) $\frac{\sqrt{4}}{3\sqrt{25}}$

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

Solve each equation.

$$11) |8k| - 4 = 52$$

Solve each equation by factoring.

$$12) p^2 + p - 6 = 0$$

Factor each completely.

$$13) n^2 - 13n + 42$$

$$14) 5r^2 + 11r - 12$$

Solve each equation by completing the square.

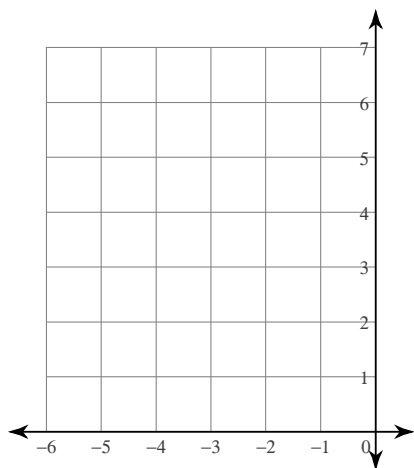
$$15) 3m^2 - 12m - 36 = 0$$

Solve each equation with the quadratic formula.

$$16) 3p^2 - p - 10 = 0$$

Sketch the graph of each function.

17) $y = x^2 + 6x + 11$

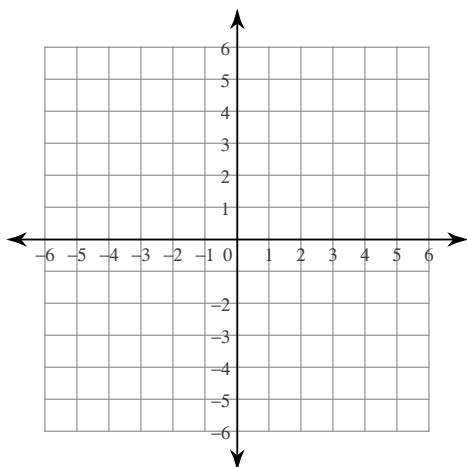


Solve each system by substitution.

18) $x + 6y = -17$
 $-3x - 2y = -13$

Sketch the graph of each line.

19) $-x + y = 0$



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

20) through: $(-4, 2)$, slope = $-\frac{3}{2}$

Answers to Week 9 (ID: 1)

1) $\{-12\}$

2) -8

3) $4a^6$

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

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

6) $-11\sqrt{3}$

7) $3\sqrt{6}$

8) $8\sqrt{15} + 8\sqrt{5}$

9) $\frac{2}{15}$

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

11) $\{7, -7\}$

12) $\{2, -3\}$

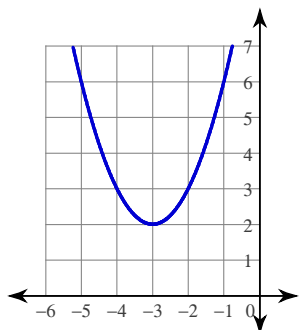
13) $(n - 7)(n - 6)$

14) $(5r - 4)(r + 3)$

15) $\{6, -2\}$

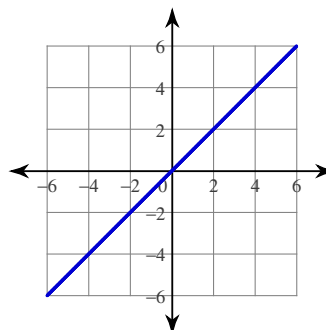
16) $\left\{2, -1\frac{2}{3}\right\}$

17)



18) $(7, -4)$

19)



20) $3x + 2y = -8$