

Week 4

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Solve each proportion.

1) $\frac{p}{7} = \frac{p-2}{4}$

Simplify. Your answer should contain only positive exponents.

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

3) $(2u^4v^2)^2$

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

Simplify. Use absolute value signs when necessary.

5) $\sqrt{216r^4}$

Simplify.

6) $3\sqrt{5} + 3\sqrt{5}$

7) $\sqrt{5} \cdot \sqrt{5}$

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

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

10) $\frac{\sqrt{2}}{-1 - \sqrt{2}}$

Solve each equation.

11) $|8n| + 5 = 85$

Solve each equation with the quadratic formula.

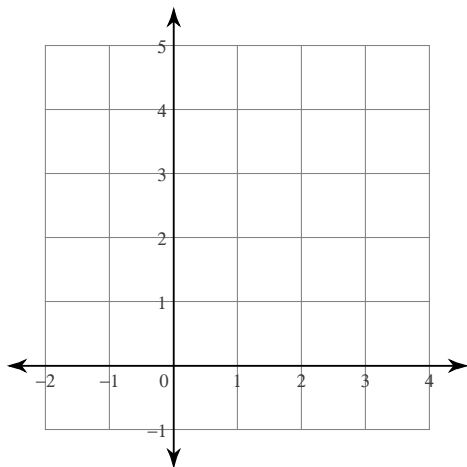
12) $8v^2 = -2 + 12v$

Solve each equation by factoring.

13) $x^2 - x - 2 = 0$

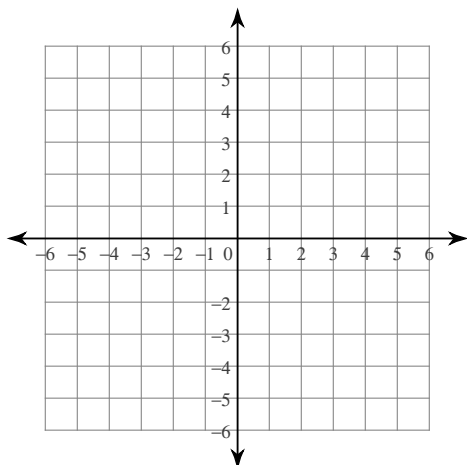
Sketch the graph of each function.

14) $f(x) = -(x - 1)^2 + 4$



Sketch the graph of each line.

15) $y = \frac{7}{2}x - 2$



Solve each system by elimination.

16) $5x + 10y = -5$
 $4x + 5y = -4$

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

17) Slope = $\frac{7}{5}$, y-intercept = 2

Factor each completely.

18) $n^2 - 14n + 45$

19) $7x^2 - 62x + 48$

Solve each equation by completing the square.

20) $6b^2 + 12b - 21 = 0$

Answers to Week 4 (ID: 1)

1) $\{4.66\}$

2) $-12y^4x$

3) $4u^8v^4$

4) $\frac{1}{y^5x^3}$

5) $6r^2\sqrt{6}$

6) $6\sqrt{5}$

7) 5

8) $3\sqrt{2} + 2\sqrt{3}$

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

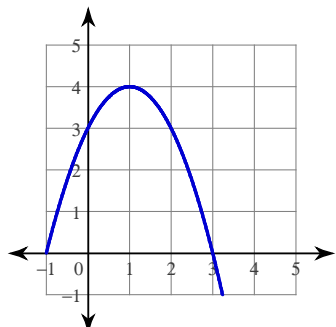
10) $\sqrt{2} - 2$

11) $\{10, -10\}$

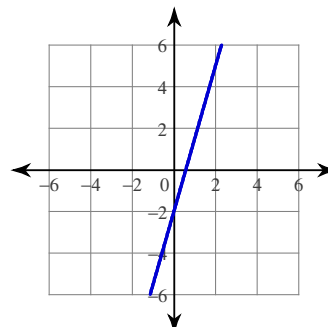
12) $\left\{\frac{3 + \sqrt{5}}{4}, \frac{3 - \sqrt{5}}{4}\right\}$

13) $\{-1, 2\}$

14)



15)



16) $(-1, 0)$

17) $7x - 5y = -10$

18) $(n - 9)(n - 5)$

19) $(7x - 6)(x - 8)$

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