

1a. -14

1b. Not a real number.

1c. -4

2. $\sqrt{40^2 + 9^2} = 41$

3a. $\sqrt{56} = \sqrt{4 \cdot 14} = 2\sqrt{14}$

3b. $\sqrt{900y^8} = 30y^4$

3c. $\sqrt{25t^{11}} = 5t^5\sqrt{t}$

3d. $\sqrt{\frac{y^4}{100}} = \frac{y^2}{10}$

4a. $11\sqrt{14} - \sqrt{14} = 10\sqrt{14}$

4b. $\sqrt{49 \cdot 2} - \sqrt{36 \cdot 2} + \sqrt{25 \cdot 2} = 7\sqrt{2} - 6\sqrt{2} + 5\sqrt{2} = 6\sqrt{2}$

5a. $\frac{4\sqrt{6}}{\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \frac{4\sqrt{30}}{5}$

5b. $\sqrt{\frac{1}{3}} = \frac{1}{\sqrt{3}} = \frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

6a. $2\sqrt{5} \cdot \sqrt{2} + 2\sqrt{5} \cdot 3\sqrt{5} = 2\sqrt{10} + 30$

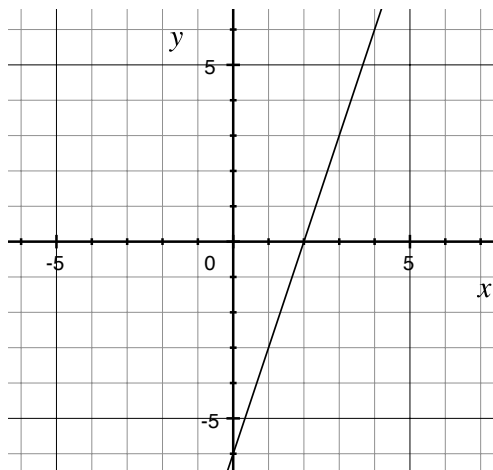
6b. $(3 - \sqrt{5})(3 + \sqrt{5}) = 4$

7. $\frac{12 - 2\sqrt{10}}{4} = \frac{6 - \sqrt{10}}{2}$

8. $(2, 13)$ and $(-6, -3)$

9. x -intercept is $(12, 0)$, y -intercept is $(0, -8)$.

10a. $y = 3x - 6$



10b. This is a vertical line through $x = 4$.

11. $m = \frac{8 - 4}{-3 - (-2)} = -4$.

12. Writing $y = -\frac{1}{2}x + 4$ (slope-intercept form), it's seen that the slope is $-\frac{1}{2}$.

13. We have $m = -5$ and $b = 6$, so $y = mx + b$ yields the equation $y = -5x + 6$.

14.

