

Answer Key

1.1. 31

1.2. $\frac{7}{29} - \frac{26}{29}i$

2.1. $x = -2$

2.2. $x = \frac{1}{8} \pm \frac{\sqrt{47}}{8}i$

3.1. -4

3.2. $\frac{x^3(x-11)}{2(x-2)}$

4. $x = \frac{3}{4}$ Reject $x = -3$

5.1. $\frac{2y^3}{x^2}$

5.2. $x = -5$

6. Center: $(-9,7)$ Radius: 6 Four Points: $(-15,7), (-9,1), (-9,13), (-3,7)$

7. $(-1,2), (-1,-2)$ Reject $(-11,4i), (-11,-4i)$

8.1. $-10x(x+5)(x-16)$

8.2. $y = -\frac{7}{6}x + \frac{1}{3}$ or $y - 5 = -\frac{7}{6}(x + 4)$ or $y + 9 = -\frac{7}{6}(x - 8)$

8.3. $(2, -2)$

8.4. $2\sqrt{85}$

9.1. $x = -6$ or $x = -2$

9.2. $c = 6$ because c is the y -intercept of a quadratic expression (or something similar)

9.3. a is negative because the parabola is upside down.

9.4. There are two solutions to the system because the graph has two points where $y = 4$. (or something similar)

9.5. vertex: $(-2,8)$

10.1. 3.483

10.2. $\frac{13}{5}$

11.1. \$102500.90

11.2. \$52500.90