

7.2 Parabolas

1. y-intercept, turning point, and roots (x-intercepts) if any.
3.
 - a. c determines the y-intercept.
 - b. b determines the y-intercept.
 - c. d determines the y-intercept.
 - d. $x = 0$
5. a. $x \approx -4.37$ or $x \approx 1.37$ b. $(0, -6)$ c. $(-1.5, -8.25)$
7. a. no root b. one root c. two roots
9. a. $y = -16(x-3)(x+1)$ b. $x = 3$ or $x = -1$ d. answers will vary. Window must include the point $(1, 64)$
11. a. between $t = 5$ and $t = 6$. b. between $t = 2$ and $t = 3$.
13. a. no b. about 104 feet
15. between 4.5 and 4.6 seconds
17. Area = 93.5 in^2 Perimeter = 39 in.
19. $2x^3 - 5x^2 - 12x$