

1.  $x = -1$

2.  $x = \frac{85}{12}$

3.  $n = 3.2$

4.  $x = -\frac{23}{48}$

5.  $-3 < n < \frac{3}{2}$

6.  $x < -5$  or  $x > -0.52$

7.  $x = -3, 8$

8.  $x = 0, 4$

9.  $f(5) = 65$

10.  $f(-1) = -10$

11.  $(3, -2)$

12.  $(-2, -3)$

13.  $(1, 2, -3)$

14. 6 nickels & 30 dimes

15.  $\{15, 17, 19\}, \{17, 19, 21\}, \{19, 21, 23\}$

16. Boat 14 mph; Current 2 mph

17.  $(2x + 5)(x - 2)$

18.  $(5x - 7)(x + 1)$

19.  $(6x + 1)(36x^2 - 6x + 1)$

20.  $(3x - 4)(9x^2 + 12x + 16)$

21.  $x = -\frac{15}{2}, \frac{1}{2}$

22.  $x = -8, -3$

**23.**  $8 - 14i$

**24.**  $-22 + 26i$

**25.**  $-8 + 24i$

**26.**  $30 - 15i$

**27.**  $-7 + 24i$

**28.**  $-5 - 12i$

**29.**  $\frac{3 \pm i\sqrt{7}}{4}$

**30.**  $\frac{-5 \pm i\sqrt{3}}{4}$

**31.**  $-4 \pm \sqrt{19}$

**32.**  $\frac{10+i}{2}$

**33.**  $-2187$

**34.**  $1024$

**35.**  $4096$

**36.**  $4096$

**37.**  $512x$

**38.**  $\frac{y^8}{9}$

**39.**  $x = 200$

**40.**  $x = 4$

**41.**  $x = 3$

**42.**  $x = 3$

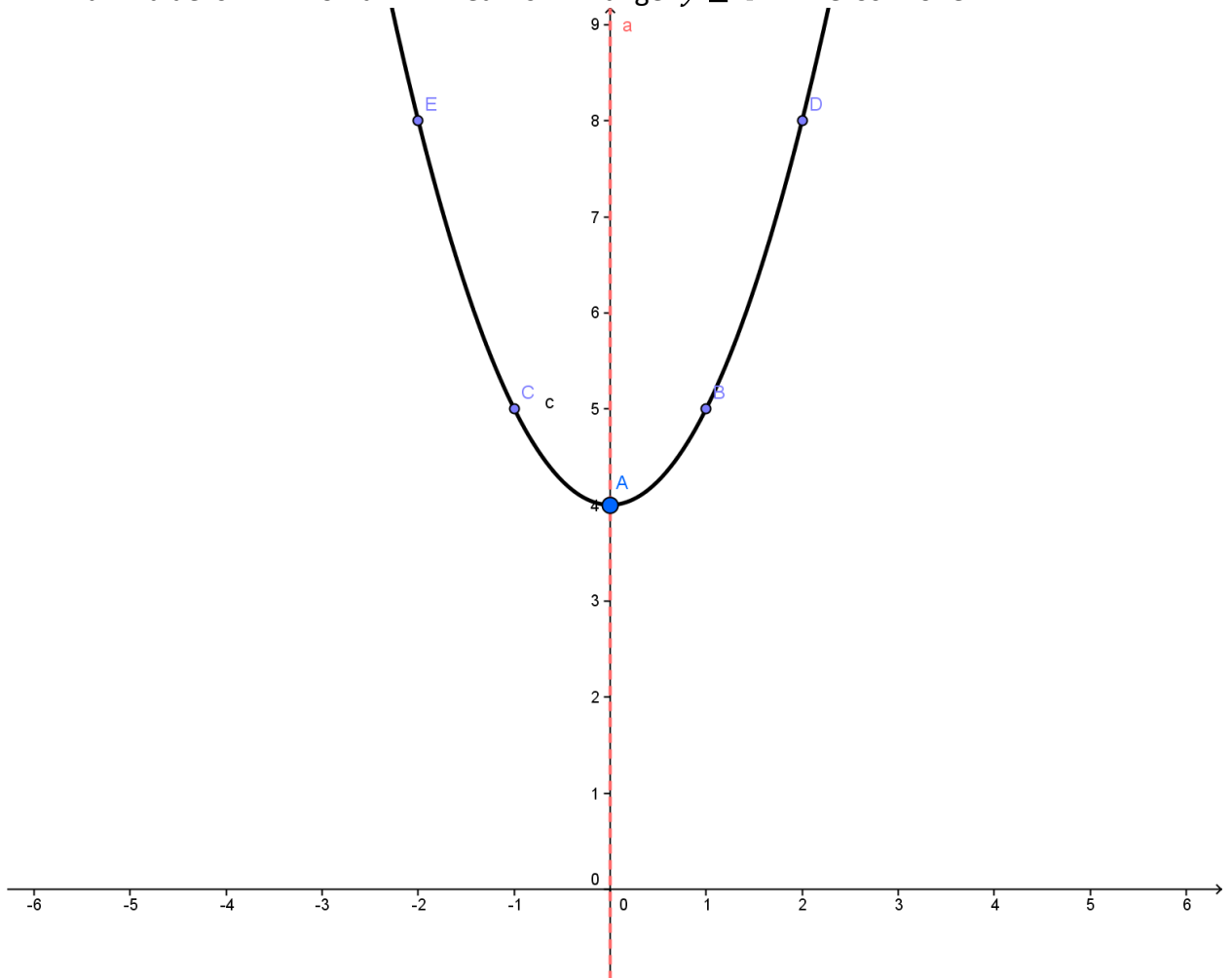
**43.**  $x = -\frac{1}{2}$

44.  $x = -\frac{1}{2}, 3$

45. Width  $\frac{1}{2}$  cm; Length 2 cm

46.  $x = -8, 9$

47. Vertex form:  $y - 4 = x^2$     Vertex:  $(0, 4)$     Opens UP    Same width as  $y = x^2$   
Minimum value is 4    Domain: All real #s    Range:  $y \geq 4$     Zeros: None



48. Vertex form:  $y - 18 = -(x + 3)^2$  Vertex:  $(-3, 18)$  Opens DOWN

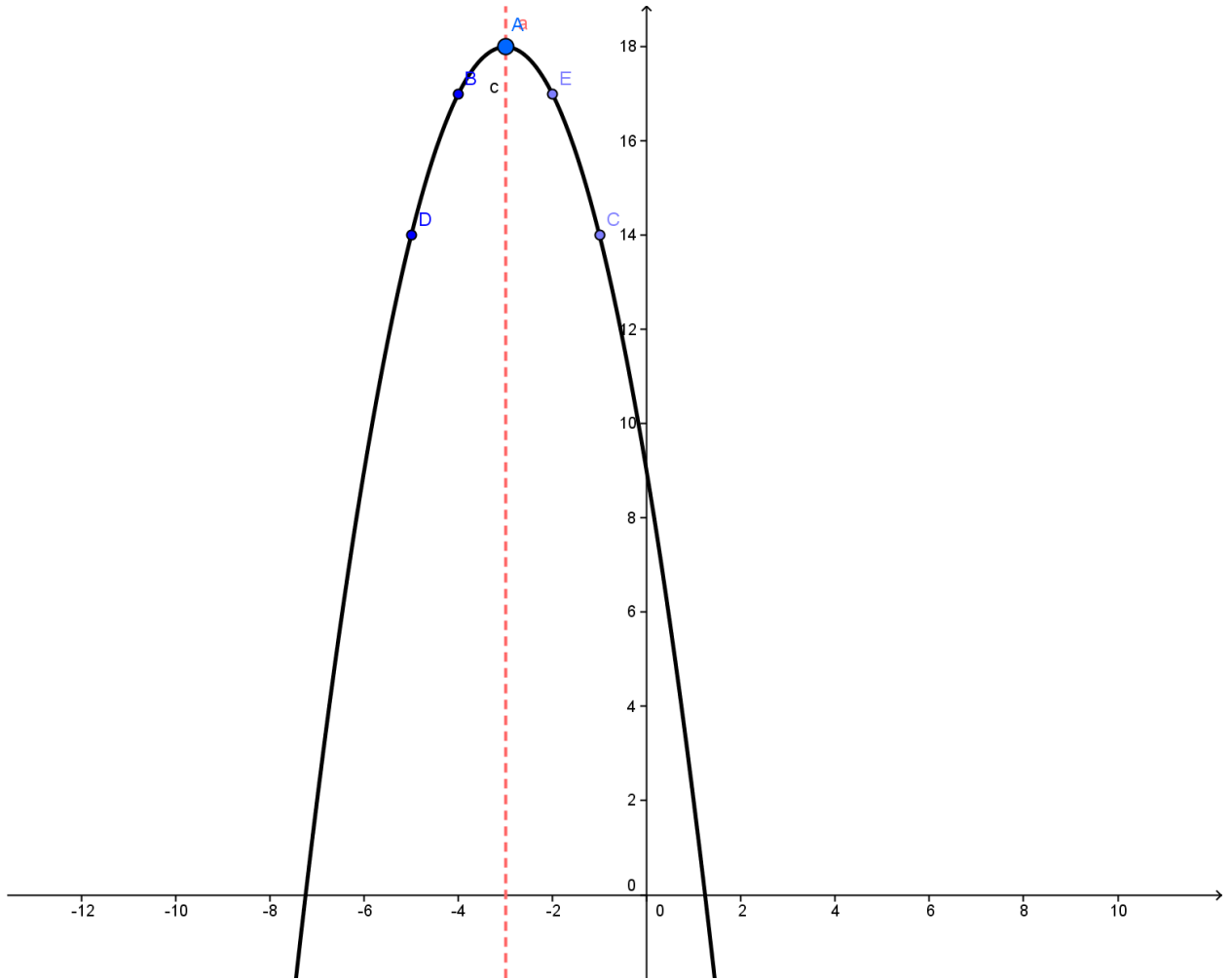
Same width as  $y = x^2$

Maximum value is 18

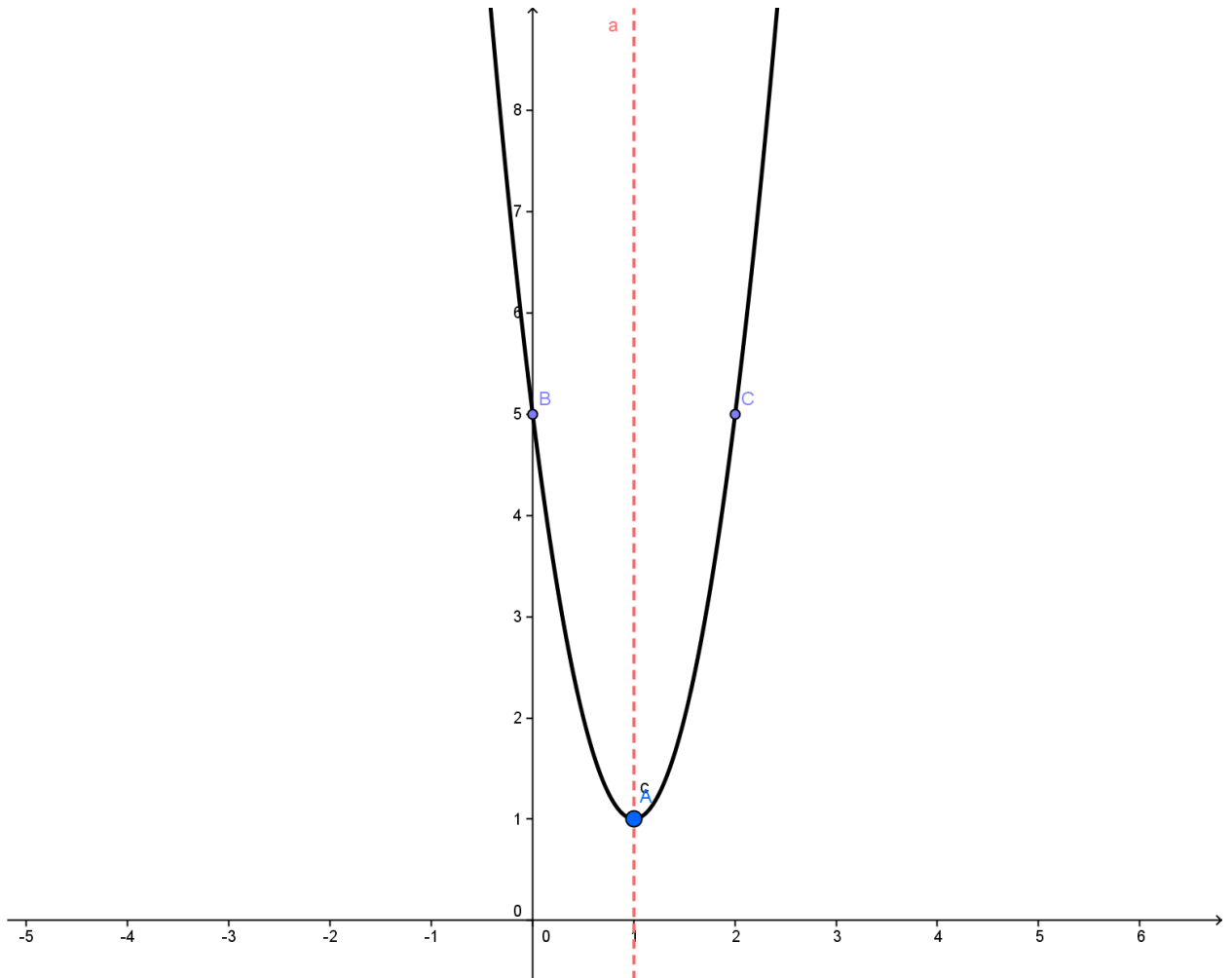
Domain: All real #s

Range:  $y \leq 18$

Zeros:  $-3 \pm 3\sqrt{2}$



49. Vertex form:  $y - 1 = 4(x - 1)^2$  Vertex:  $(1, 1)$  Opens UP Narrower than  $y = x^2$   
Minimum value is 1 Domain: All real #s Range:  $y \geq 1$  Zeros: None



50. Vertex form:  $y + \frac{1}{2} = \frac{1}{2}(x + 5)^2$  Vertex:  $(-5, -\frac{1}{2})$  Opens UP Wider than  $y = x^2$   
Minimum value is  $-\frac{1}{2}$  Domain: All real #s Range:  $y \geq -\frac{1}{2}$  Zeros:  $-4, -6$

