

Chapter 10 Practice Test

1 [C]

2 [A]

3 [B]

4 $y = 2x^2 + 6x - 5$

a.o.s:

$$x = \frac{-b}{2a}$$

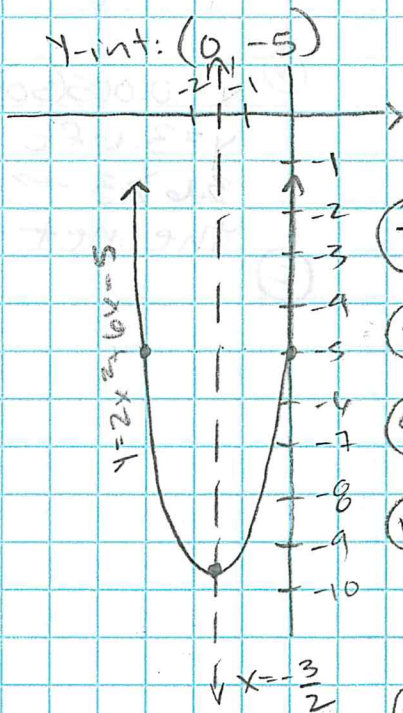
$$= \frac{-6}{2(2)}$$

$$= \frac{-6}{4}$$

vertex: $(-\frac{3}{2}, -\frac{19}{2})$

y-int: $(0, -5)$

$x = -\frac{3}{2}$

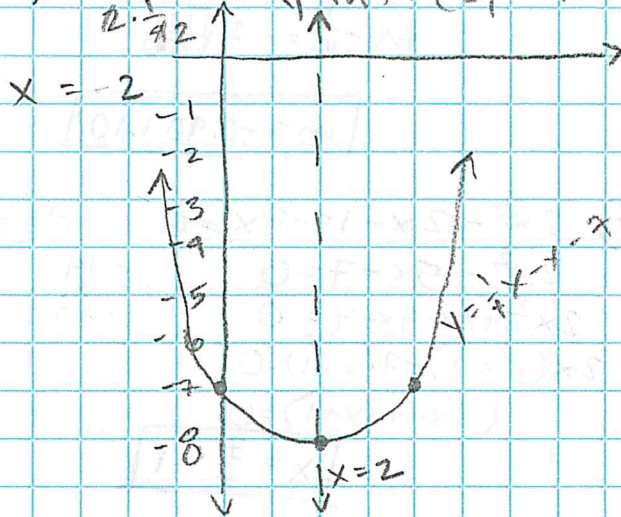


6 $y = \frac{1}{4}x^2 - x - 7$

a.o.s = $x = \frac{1}{2 \cdot \frac{1}{4}} = 2$

vertex: $(-2, -8)$

y-int: $(0, -7)$



7 $x = -0.2, -4.8$

8 $x = 0.4, 7.6$

9 $x = -1.7, 1$

10 $3x^2 = 108$

$$\sqrt{x^2} = \pm \sqrt{36}$$

$$|x| = \pm 6$$

11 $-5w^2 + 51 = 6$

$$-5w^2 = -45$$

$$\sqrt{w^2} = \pm \sqrt{9}$$

$$|w| = \pm 3$$

5 $y = -4x^2 - 8x + 25$

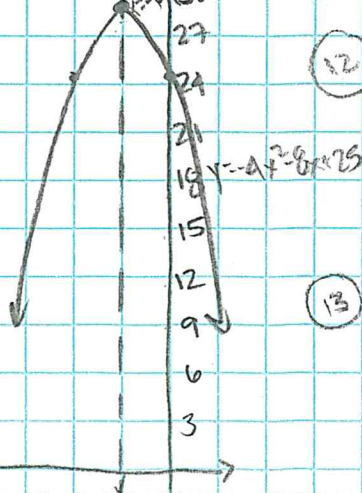
a.o.s:

$$x = \frac{-b}{2a}$$

$x = -1$

vertex: $(-1, 29)$

y-int: $(0, 25)$



12 $-p^2 + 2p + 3 = 0$ $d = 16$

$$p^2 - 2p - 3 = 0$$

$$(p-3)(p+1) = 0$$

$$|p| = 3, -1$$

13 $-2t^2 + 6t + 9 = 0$ $d = 108$

$$t^2 - 3t + \frac{9}{2} = \frac{9}{2} + \frac{9}{4}$$

$$\sqrt{(t - \frac{3}{2})^2} = \pm \sqrt{\frac{20}{4}}$$

$$t - \frac{3}{2} = \pm \sqrt{5}$$

$$|t| = -1.10, 4.10$$

$$\textcircled{14} \quad 5m^2 - m = 5$$

$$m^2 - \frac{1}{5}m + \frac{1}{100} = 1 + \frac{1}{100} = \left(\frac{1}{10}\right)^2$$

$$\sqrt{\left(m - \frac{1}{10}\right)^2} = \pm \sqrt{\frac{101}{100}}$$

$$m - \frac{1}{10} = \pm \sqrt{\frac{101}{100}}$$

$$\boxed{m = -0.90, 1.10}$$

$$\textcircled{15} \quad 2x^2 - 12x - 1 = -7x + 6 \quad d = 81$$

$$2x^2 - 5x - 7 = 0$$

$$2x^2 + 2x - 7x - 7 = 0$$

$$2x(x+1) - 7(x+1) = 0$$

$$(2x-7)(x+1) = 0$$

$$\boxed{x = \frac{7}{2}, -1}$$

$$\begin{array}{l} -14 \\ -7 \end{array}$$

$$\textcircled{16} \quad 3x^2 - 4x + 9 = 0$$

$$16 - 4(3)(9) = d$$

$$-92 = d$$

$$\boxed{\text{NO SOLUTION}}$$

$$\textcircled{17} \quad 4g^2 - 12g + 11 = 0$$

$$144 - 4(4)(11) = d$$

$$-32 = d$$

$$\boxed{\text{NO SOLUTION}}$$

$$\textcircled{18} \quad -2n^2 + 7n - 1 = 0$$

$$49 - 4(-2)(-1) = d$$

$$41 = d$$

$$\boxed{\text{TWO SOLUTIONS}}$$

$$\textcircled{19} \quad -m^2 - 17m = 0$$

$$289 - 4(1)(0) = d$$

$$289 = d$$

$$\boxed{\text{TWO SOLUTIONS}}$$

$$\textcircled{20} \quad -6x^2 - x - 5 = 0$$

$$1 - 4(-6)(-5) = d$$

$$-119 = d$$

$$\boxed{\text{NO SOLUTION}}$$

$$\textcircled{21} \quad 10x^2 - 13 = 0$$

$$0 - 4(10)(-13) = d$$

$$520 = d$$

$$\boxed{\text{TWO SOLUTIONS}}$$

$$\textcircled{22} \quad \text{Did not cover}$$

$$\textcircled{23} \quad \text{Did not cover}$$

$$\textcircled{24} \quad y = -0.005x^2 + 0.17x + 3$$

$$\textcircled{a} \quad 4.4 \text{ ft}$$

$$\textcircled{b} \quad y = -0.005(30)^2 + 0.17(30) + 3$$

$$y = 3.6 \text{ ft}$$

$$3.6 > 3 \rightarrow \text{it will clear}$$

$$\text{the net}$$

$$\textcircled{c}$$