

## CHAPTER 9 FINAL EXAM REVIEW ANSWERS

1) Yes, 2nd difference of +16

2) No, 2nd difference is not constant

3) Yes, 2nd difference of +2

4)  $(-6, 8)$ ; Max of 8

5)  $(-2, 5)$ ; Max of 5

6)  $(-4, 2)$ ; Max of 2

7) -1, 3

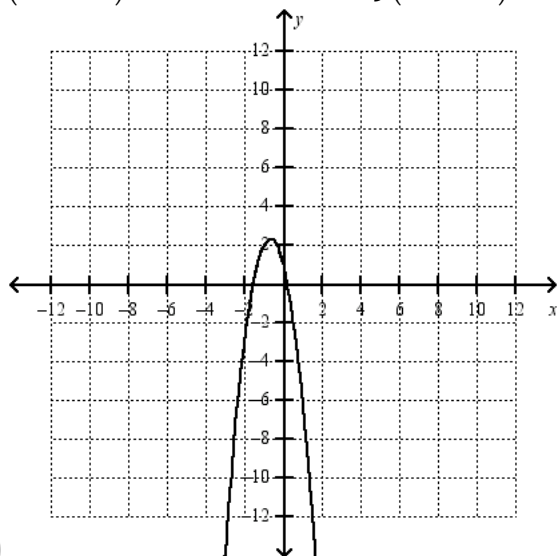
8) -2, 4

9) -1, 4

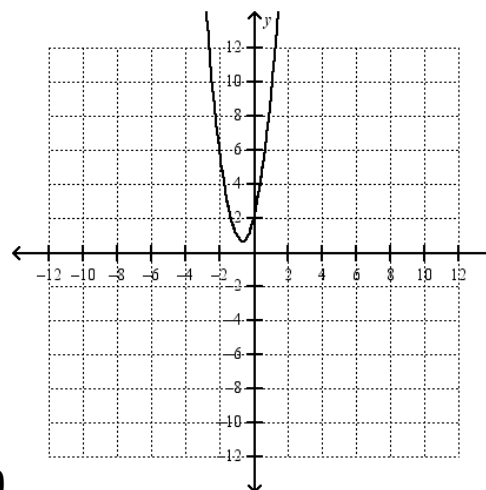
10)  $(-4, -2)$

11)  $(-5, -9)$

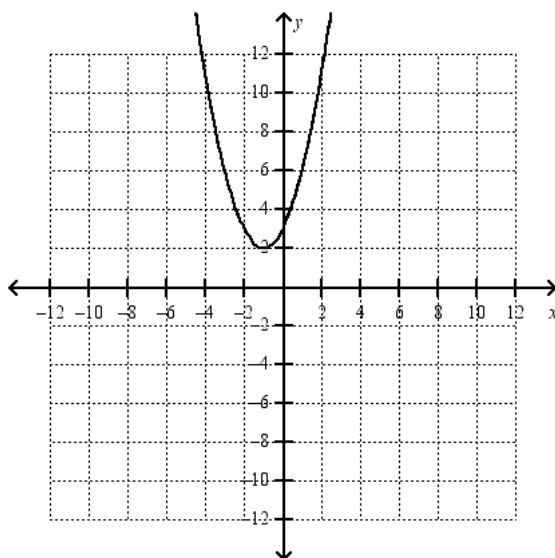
12)  $(1, -4)$



13)



14)



15)

## CHAPTER 9 FINAL EXAM REVIEW ANSWERS

**16)**  $-1, -3$

$$x^2 + x - 6 = 14$$

**19)**  $x^2 + x - 20 = 0$   
 $(x + 5)(x - 4) = 0$   
 $-5, 4$

**17)**  $3, 5$

$$x^2 + x - 20 = 10$$

**20)**  $x^2 + x - 30 = 0$   
 $(x + 6)(x - 5) = 0$   
 $-6, 5$

**18)**  $-3, -1$

$$x^2 + x - 12 = -6$$

**21)**  $x^2 + x - 6 = 0$   
 $(x + 3)(x - 2) = 0$   
 $-3, 2$

**22)**  $(b - 4)(b + 3) = 0$   
 $4, -3$

**23)**  $(z - 5)(z + 4) = 0$   
 $5, -4$

**24)**  $(b - 5)(b - 6) = 0$   
 $5, 6$

$$x^2 = \frac{121}{49}$$

**25)**  $\sqrt{x^2} = \sqrt{\frac{121}{49}}$   
 $x = \pm \frac{11}{7}$

$$x^2 = \frac{64}{9}$$

**26)**  $\sqrt{x^2} = \sqrt{\frac{64}{9}}$   
 $x = \pm \frac{8}{3}$

$$x^2 = \frac{64}{169}$$

**27)**  $\sqrt{x^2} = \sqrt{\frac{64}{169}}$   
 $x = \pm \frac{8}{13}$

$$x^2 = \frac{-49}{25}$$

**28)**  $\sqrt{x^2} = \sqrt{\frac{-49}{25}}$   
 $x = \pm \frac{7}{5}i$

$$x^2 = \frac{-9}{64}$$

**29)**  $\sqrt{x^2} = \sqrt{\frac{-9}{64}}$   
 $x = \pm \frac{3}{8}i$

$$x^2 = \frac{-49}{36}$$

**30)**  $\sqrt{x^2} = \sqrt{\frac{-49}{36}}$   
 $x = \pm \frac{7}{6}i$

## CHAPTER 9 FINAL EXAM REVIEW ANSWERS

$$a = 1$$

$$b = -2$$

$$31) c = -8$$

$$\frac{2 \pm \sqrt{(-2)^2 - 4(1)(-8)}}{2(1)} = \frac{2 \pm \sqrt{36}}{2} = 1 \pm 3 = 4, -2$$

$$a = 1$$

$$b = -4$$

$$32) c = -5$$

$$\frac{4 \pm \sqrt{(-4)^2 - 4(1)(-5)}}{2(1)} = \frac{4 \pm \sqrt{36}}{2} = 2 \pm 3 = 5, -1$$

$$a = 1$$

$$b = -3$$

$$33) c = -10$$

$$\frac{3 \pm \sqrt{(-3)^2 - 4(1)(-10)}}{2(1)} = \frac{3 \pm \sqrt{49}}{2} = 3 \pm 3.5 = 6.5, -0.5$$

$$2x^2 = -8$$

$$34) \begin{aligned} x^2 &= -4 \\ \sqrt{x^2} &= \sqrt{-4} \\ x &= \pm 2i \end{aligned}$$

$$3x^2 = -27$$

$$35) \begin{aligned} x^2 &= -9 \\ \sqrt{x^2} &= \sqrt{-9} \\ x &= \pm 3i \end{aligned}$$

$$4x^2 = -16$$

$$36) \begin{aligned} x^2 &= -4 \\ \sqrt{x^2} &= \sqrt{-4} \\ x &= \pm 2i \end{aligned}$$