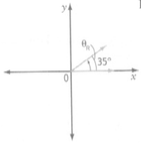
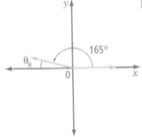
**Chapter 2 Review- SOLUTIONS**

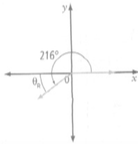
**1.** **a)** I, R = 35

****

**b)** II, R = 15



**c)** III, R = 36



**2. a)** 1` **b)**

**c)**

**3.** sin= , cos = , tan = -

**4.** cos = - , tan = -

**5.** **a)** 54, 306 **b)** 300, 240

**6.** **a)** 19 **b)** 205

**7. a)** 0 triangles **b)** 2 triangles

**8. a)** 13.4 **b)** 27

**Chapter 3 Review- SOLUTIONS**

**1.** **a)** two *x*-intercepts, *x* = -5, domain {*x |* *x* R},

range {*y* | *y* 6, *y* R}

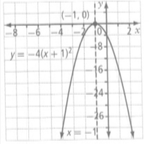
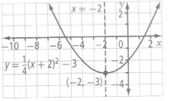
**b)** one *x*-intercept, *x* = 8, domain {*x* | *x* R},

range {*y* | *y* 0, *y* R}

**2.** **a)** (3, -7); maximum value is -7

**b)** (-11, 8); minimum value isb8

**3.** **a)** b)

**4. a)** *y* = -*x*2 **b)** *y* = -(*x* – 4)2 + 5

**c)** Answers may vary. Example: The value of *a* is

the same but the values of *p* and *q*change.

**5.** **a)** (-4, 0), (2, 0), (0, -8)

**b)** (-9, 0), (-1, 0), (0, 9)

**6.** **a)** - **b)** -

**7.** **a)** *x* = -5, opens downward

**b)** *x* = , opens upward

**8. a)** *y* = (*x* + 3)2 + 6, domain {*x* | *x* R},

range {*y* | *y* 6, *y* R}

**b)** *y* = -3(*x* + 6)2 + 8, domain {*x* | *x* R},

range {*y* | *y* 8, *y* R}

**c)** *y* = 2(*x* – 4)2 – 10, domain {*x* | *x* R},

range {*y* | *y* -10, *y* R}

d) *y* = (*x* – 1)2 + , domain {*x* | *x* R},

range

**9.** **a)** (10, 105)

**b)** The maximum profit of $105 occurs on the 10th

day of sales.

**10.** **a)** *r* = (10 + *v*)(120 – 5*v*)

**b)** The maximum revenue of $1445 occurs at a price

of $17

**Chapter 4 Review- SOLUTIONS**

**1. a)** -1.5 **b) 3**

**2.** **a)** Example: The location of the vertex and the

direction of opening determine the number

of zeros for the quadratic function. In this

case, the graph would intersect the *x*-axis in

two places.

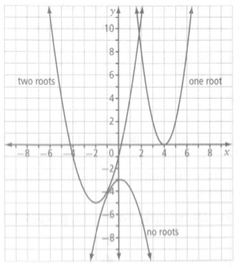
**b)** Example: The location of the vertex is on the

*x*-axis.

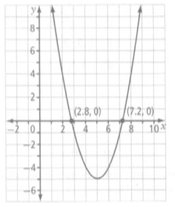
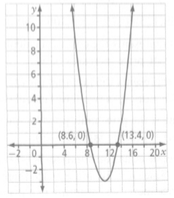
**c)** Example: The minimum is above the *x*-axis, or

the maximum is below the *x*-axis, meaning that

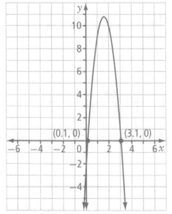
the graph does not intersect the *x*-axis.



**3.** **a)** 2.8, 7.2 **b)** 8.6, 13.4

**c)** 0.1, 3.1



**4.** **a)** (*a* – 7*b* + 68)(*a* + 7*b* – 58)

**b)** (*x* + 3)(*x* – 5) **c)**

**5.** **a)** -4, -2 **b)**

**c)** , **d)**

**6.** 9 in. by 12 in.

**7.** **a)** 13 **b)** -18, 4

**c)** **d)**

**8.** **a)**

**b)**

**9.** 30th day

**10.** **a)** 2 roots **b)** 2 roots

**c)** 1 root **d)** 0 roots

**11.** **a)** ; 1.1, 8.9

**b)**

**12. a) -7, 3 b) , 3**

**b)**