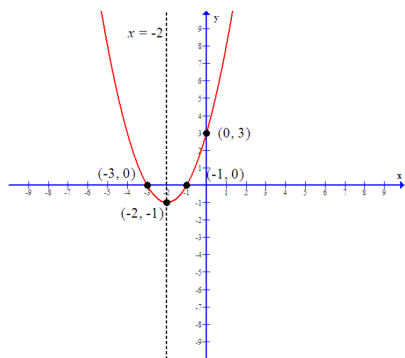


## Section 5.8

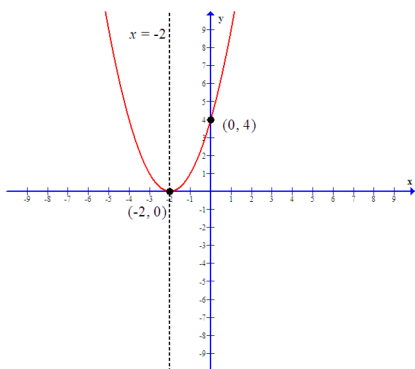
### Exercises

#### Odd Answers

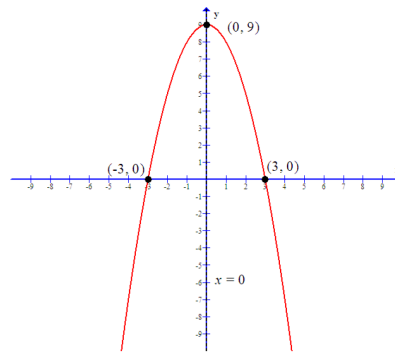
1. a) opens up  
b) minimum  
c)  $(-2, -1)$   
d)  $x = -2$   
e)  $-1$   
f)  $(0, 3)$   
g)  $(-1, 0), (-3, 0)$



3. a) opens up  
b) minimum  
c)  $(-2, 0)$   
d)  $x = -2$   
e)  $0$   
f)  $(0, 4)$   
g)  $(-2, 0)$



5. a) opens down  
b) maximum  
c)  $(0, 9)$   
d)  $x = 0$   
e)  $9$   
f)  $(0, 9)$   
g)  $(-3, 0), (3, 0)$



7. a) opens down

b) maximum

c)  $\left(\frac{-5}{2}, \frac{29}{4}\right)$

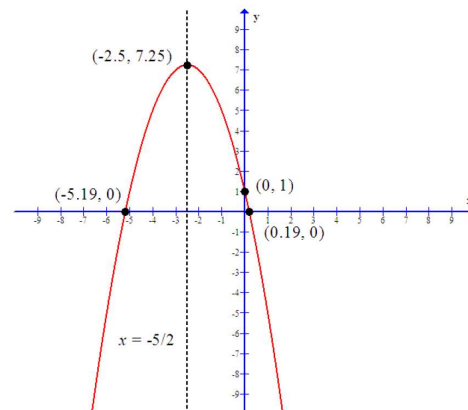
d)  $x = \frac{-5}{2}$

e)  $\frac{29}{4}$

f)  $(0, 1)$

g)  $\left(\frac{-5+\sqrt{29}}{2}, 0\right), \left(\frac{-5-\sqrt{29}}{2}, 0\right)$

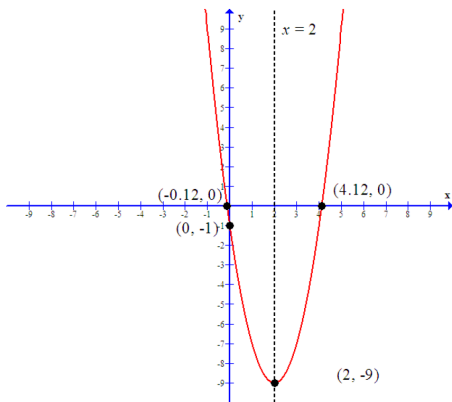
or approx.  $(0.19, 0), (-5.19, 0)$



9. a) opens up  
 b) minimum  
 c) (2, -9)  
 d)  $x = 2$   
 e) -9  
 f) (0, -1)

g)  $\left(\frac{4+3\sqrt{2}}{2}, 0\right), \left(\frac{4-3\sqrt{2}}{2}, 0\right)$

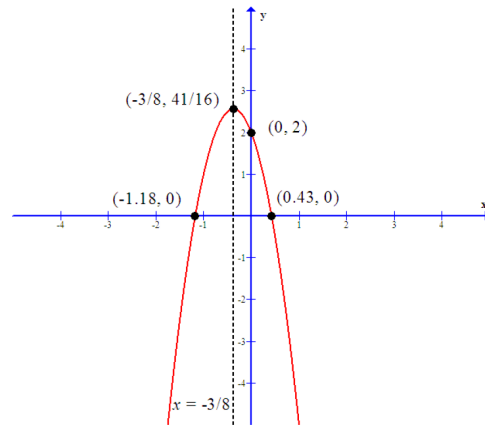
which is approx. (4.12, 0), (-0.12, 0)



11. a) opens down  
 b) maximum  
 c)  $\left(\frac{-3}{8}, \frac{41}{16}\right)$   
 d)  $x = \frac{-3}{8}$   
 e)  $\frac{41}{16}$   
 f) (0, 2)

g)  $\left(\frac{-3+\sqrt{41}}{8}, 0\right), \left(\frac{-3-\sqrt{41}}{8}, 0\right)$

which is approx. (0.43, 0), (-1.18, 0).



13. a) 2 seconds  
 b) 64 feet

15. 11.25 meters by 22.5 meters;  
 253.125 square meters