

**LESSON 118 ANSWERS .....**

1.  $p = 0$  and  $q = 2$   
 $x = (0 + 2)/2 = 1$   
 $y = -1$  at  $x = 1$   
Vertex: (1, -1)
2.  $p = -1$  and  $q = 3$   
 $x = (-1 + 3)/2 = 1$   
 $y = -4$  at  $x = 1$   
Vertex: (1, -4)
3.  $p = -4$  and  $q = 4$   
 $x = (-4 + 4)/2 = 0$   
 $y = 4$  at  $x = 0$   
Vertex: (0, 4)
4.  $p = 0$  and  $q = 4$   
 $x$ -intercept(s): 0, 4  
  
 $x = (0 + 4)/2 = 2$   
 $y = -4$  at  $x = 2$   
Vertex: (2, -4)  
  
 $y = 0$  at  $x = 0$   
 $y$ -intercept: 0
5.  $p = 0$  and  $q = -2$   
 $x$ -intercept(s): 0, -2  
  
 $x = (0 - 2)/2 = -1$   
 $y = 1$  at  $x = -1$   
Vertex: (-1, 1)  
  
 $y = 0$  at  $x = 0$   
 $y$ -intercept: 0
6.  $p = -1$  and  $q = 5$   
 $x$ -intercept(s): -1, 5  
  
 $x = (-1 + 5)/2 = 2$   
 $y = -9$  at  $x = 2$   
Vertex: (2, -9)  
  
 $y = -5$  at  $x = 0$   
 $y$ -intercept: -5
7.  $p = 1$  and  $q = 7$   
 $x$ -intercept(s): 1, 7  
  
 $x = (1 + 7)/2 = 4$   
 $y = 9$  at  $x = 4$   
Vertex: (4, 9)  
  
 $y = -7$  at  $x = 0$   
 $y$ -intercept: -7
8.  $p = 1$  and  $q = -3$   
 $x$ -intercept(s): 1, -3  
  
 $x = (1 - 3)/2 = -1$   
 $y = -8$  at  $x = -1$   
Vertex: (-1, -8)  
  
 $y = -6$  at  $x = 0$   
 $y$ -intercept: -6
9.  $p = -2$  and  $q = -6$   
 $x$ -intercept(s): -2, -6  
  
 $x = (-2 - 6)/2 = -4$   
 $y = 2$  at  $x = -4$   
Vertex: (-4, 2)  
  
 $y = -6$  at  $x = 0$   
 $y$ -intercept: -6