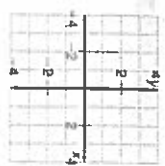


Practise

1. Draw parabolas that have the following characteristics.

a) a minimum value



b) a maximum value



c) two x-intercepts

Section
6.3

2. Complete the tables of values using the equations and then graph the data from both tables on the same grid. The first one for each data set has been done for you.

$y = x^2$

x	y
-3	9
-2	
-1	
0	
1	
2	
3	

$y = 2x^2$

x	y
-3	18
-2	
-1	
0	
1	
2	
3	

Sample calculation:

$$y = x^2$$

$$y = (-3)^2$$

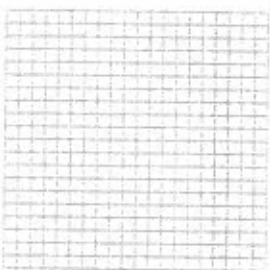
$$y = 9$$

Sample calculation:

$$y = x^2$$

$$y = 2(-3)^2$$

$$y = 18$$

3. Compare the graphs you generated in question 2.
a) Write down ways they are similar and different.

Similarities: _____

Differences: _____

b) What do you think was the reason for the difference between the graphs?

_____c) How would the graphs in question 2 change if the sign of the coefficients of the x^2 terms for each equation were negative?
Changing the sign of the coefficient of x^2 would cause the graphs to _____4. Use a graphing calculator to graph the relation $y = -2x^2 + 3x + 5$, then complete the statements.

a) The coordinates of the vertex are (____, ____) because _____

b) The equation of the axis of symmetry is _____ because _____

c) The y-intercept is _____ because _____

d) The x-intercepts are _____ because _____

e) Does this graph have a minimum value or a maximum value? What is that value?
_____Section
6.3