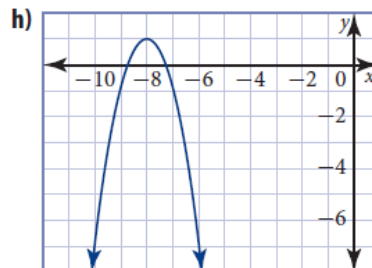
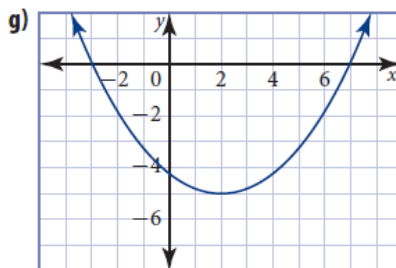
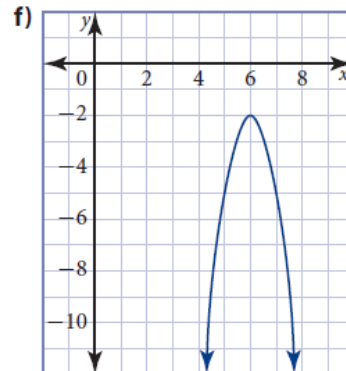
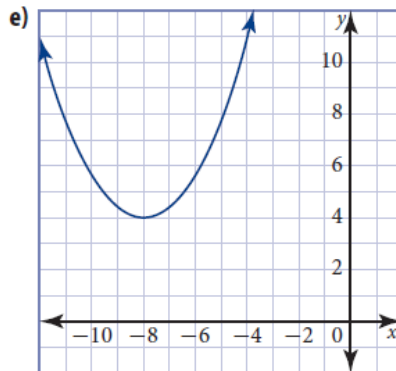
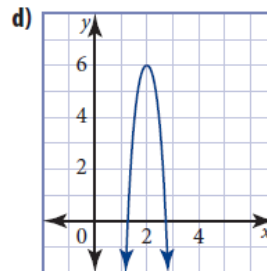
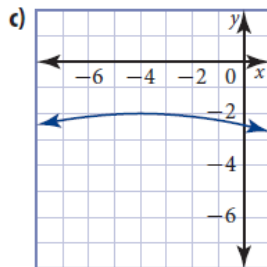
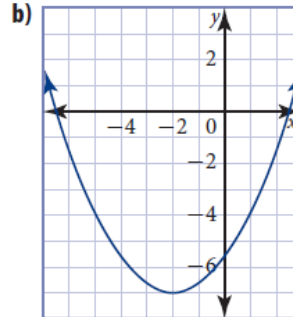
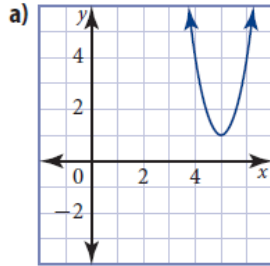


Practise **A**

For help with questions 1 and 2, refer to Example 1.

1. For each parabola
 - i) identify the coordinates of the vertex
 - ii) determine whether a is positive or negative



2. For each quadratic relation

i) identify the coordinates of the vertex

ii) determine if the parabola opens upward or downward

iii) determine if the parabola is vertically stretched or vertically compressed

iv) sketch the graph

a) $y = 2(x - 3)^2 + 12$

b) $y = -0.5(x - 10)^2 - 1$

c) $y = -7(x + 4)^2 - 8$

d) $y = -(x + 20)^2 - 5$

e) $y = 0.5(x - 11)^2 - 3$

f) $y = 8(x + 2)^2 + 9$

g) $y = -0.5(x + 6)^2 + 7$

h) $y = 2(x - 8)^2 + 2$

i) $y = 7.5(x + 2)^2 - 1$

j) $y = -0.8(x - 4)^2 + 6$