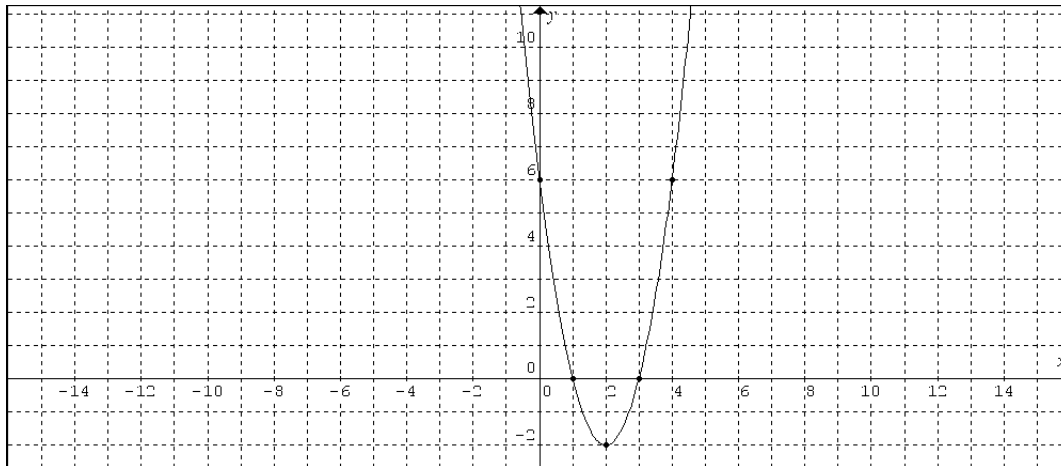


Quiz #2A – Properties of Quadratics

[12 marks]

1. The following graph is of the equation $y = 2x^2 - 8x + 6$.



- a) State the **y-intercept**. [1 mark]

6

- b) State the **zeroes**. [2 marks]

1,3

- c) Draw the **axis of symmetry** on the graph. [1 mark]

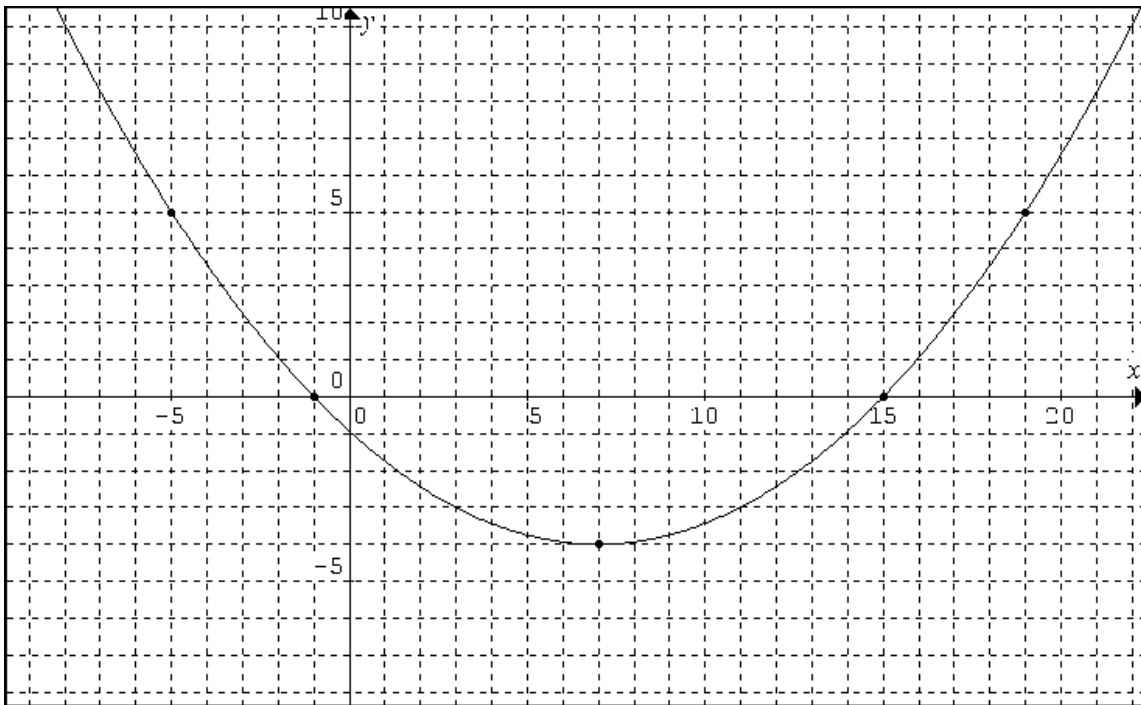
- d) State the equation of the **axis of symmetry**. [1 mark]

$x = 2$

- e) State the **vertex** of the relationship. [1 mark]

(2, -2)

2. Determine the **equation** of the parabola shown in the graph.



a) Determine the equation of the graph in **factored form**. [4 marks]

$$\begin{aligned} y &= a(x-r)(x-s) \\ y &= a(x+1)(x-15) \\ -4 &= a(7+1)(7-15) \\ -4 &= a(8)(-8) & y &= \frac{1}{16}(x+1)(x-15) \\ -4 &= a(-64) \\ \frac{1}{16} &= a \end{aligned}$$

b) Convert the factored form to **standard form**. [2 marks]

$$\begin{aligned} y &= \frac{1}{16}(x+1)(x-15) \\ y &= \left(\frac{1}{16}x + \frac{1}{16}\right)(x-15) \\ y &= \frac{1}{16}x^2 - \frac{15}{16}x + \frac{1}{16}x - \frac{15}{16} \\ y &= \frac{1}{16}x^2 - \frac{7}{8}x - \frac{15}{16} \end{aligned}$$