

Quad 5 Answers

Quadratics and turning points p.9

$$\begin{aligned} 1a) \quad y &= kx^2 \\ 4 &= 4k \\ k &= 1 \\ \therefore y &= x^2 \end{aligned}$$

$$\begin{aligned} b) \quad 3 &= k \\ \therefore y &= 3x^2 \end{aligned}$$

$$\begin{aligned} c) \quad 5 &= k \\ \therefore y &= 5x^2 \end{aligned}$$

$$\begin{aligned} d) \quad 6 &= 4k \\ k &= \frac{3}{2} \\ \therefore y &= \frac{3}{2}x^2 \end{aligned}$$

$$\begin{aligned} e) \quad 20 &= 4k \\ k &= 5 \\ \therefore y &= 5x^2 \end{aligned}$$

$$\begin{aligned} f) \quad 27 &= 9k \\ k &= 3 \\ \therefore y &= 3x^2 \end{aligned}$$

$$\begin{aligned} g) \quad -9 &= 9k \\ k &= -1 \\ \therefore y &= -x^2 \end{aligned}$$

$$\begin{aligned} h) \quad -8 &= 4k \\ k &= -2 \\ \therefore y &= -2x^2 \end{aligned}$$

$$\begin{aligned} i) \quad -5 &= k \\ \therefore y &= -5x^2 \end{aligned}$$

$$\begin{aligned} j) \quad 2 &= 4k \\ k &= \frac{1}{2} \\ \therefore y &= \frac{1}{2}x^2 \end{aligned}$$

$$\begin{aligned} k) \quad 1 &= 4k \\ k &= \frac{1}{4} \\ \therefore y &= \frac{1}{4}x^2 \end{aligned}$$

$$\begin{aligned} l) \quad 3 &= 9k \\ k &= \frac{1}{3} \\ \therefore y &= \frac{1}{3}x^2 \end{aligned}$$

$$\begin{aligned} m) \quad 360 &= 9k \\ k &= 4 \\ \therefore y &= 4x^2 \end{aligned}$$

$$\begin{aligned} n) \quad -100 &= 4k \\ k &= -25 \\ \therefore y &= -25x^2 \end{aligned}$$

$$\begin{aligned} o) \quad -12 &= 16k \\ k &= -\frac{3}{4} \\ \therefore y &= -\frac{3}{4}x^2 \end{aligned}$$

$$2a) \quad y = x^2 + 2$$

$$b) \quad y = x^2 - 1$$

$$c) \quad y = x^2 + 1.5$$

$$d) \quad y = -x^2 + 5$$

$$e) \quad y = -x^2 + 3$$

$$f) \quad y = -x^2 - 2$$

$$g) \quad y = 2x^2 + 1$$

$$h) \quad y = 5x^2 + 4$$

$$i) \quad y = 3x^2 + 2$$

$$j) \quad y = 2x^2 - 3$$

$$k) \quad y = \frac{1}{2}x^2 - 9$$

$$l) \quad y = -2x^2 + 8$$

$$m) \quad y = -x^2 + 3$$

$$n) \quad y = -3x^2 - 2$$