

4. a) i. $p = -2, q = 4$

ii. $y = a(x+2)(x-4)$
 $8 = a(6+2)(6-4)$

$$8 = 16a$$

$$\frac{1}{2} = a$$

iii. $y = \frac{1}{2}(x+2)(x-4)$

$$y = \frac{1}{2}(x^2 - 2x - 8)$$

$$y = \frac{1}{2}x^2 - x - 4$$

5. a) $m = 3, p = 2$

b) $y = d(x-3)^2 + 2$

$$8 = d(1-3)^2 + 2$$

$$-2 = d(4)$$

$$-\frac{1}{2} = d$$