3 $y = -3(x-4)(x+2)$

$y = -3(x^2+2x-4x+-8)$

$y = -3(x^2-2x)-24$

$0 = -3(x^2-2x$

$0 = -3$

$x^2-2x = 0$

$x(x-2) = 0$

$x = 0$

$x = 2$

$x = 2$

$h = 2$

$k = -24$

$(2, -24)$

4

(a) $(-2, 4)$

(b) (± 3)

(c) -6 and 2

(d) $y = -9$ $x = -2$

e $5+9 = 14$

f $a \neq 1$

5 x intercept $-2, 7$

y intercept -28

$(x+2)(x-7) = 0$

expanding we get

$x^2+2x-7x-14 = 0$

$x^2-5x-14 = -28$

$x^2-5x+14 = 0$

Quadratic relations

1 (a) real number and coefficient of x^2

The value is 1

r and s = r=s

Coordinates (h, k) - vertices

value of x vertex = -h

value of y vertex = k

2