

$$1. a) (x-8)(x-5)$$

$$b) (x+3)(x-2)$$

$$c) (3x-8)(x+2)$$

$$d) y = a(x+1)(x-5)$$

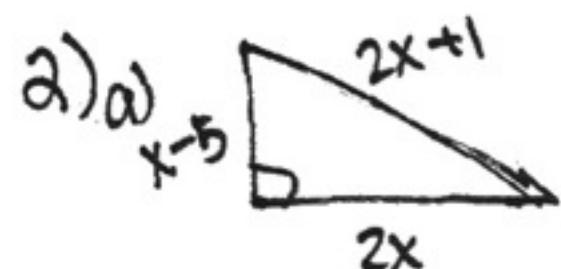
$$9 = a(2+1)(2-5)$$

$$9 = a(3)(-3)$$

$$-1 = a$$

$$y = - (x+1)(x-5)$$

$$\boxed{y = -x^2 + 4x + 5}$$



$$b) (x-5)^2 + (2x)^2 = (2x+1)^2$$

$$x^2 - 10x + 25 + 4x^2 = 4x^2 + 4x + 1$$

$$x^2 - 14x + 24 = 0$$

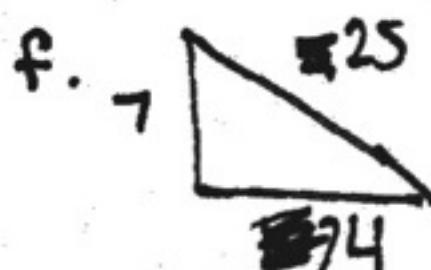
$$c) A = -16$$

$$B = -24$$

$$C = 24$$

d) graph

$$e) x=2, x=12$$



$$7. a) (x-5)(x+2)$$

$$b) A = (-2, 0)$$

$$c) B = (5, 0)$$

$$d) C = \frac{-3}{2(1)} = (1.5, -12.25)$$

$$3. a) (3x-2)(x+5)$$

$$b) x = \frac{2}{3}, x = -5$$

$$4. a) c = 12$$

$$b) y = a(x+2)(x-3)$$

~~y = a(12+2)(12-3)~~ oops!

$$12 = a(0+2)(0-3)$$

$$12 = a(-6)$$

$$\boxed{a = -2}$$

$$y = -2(x^2 - x - 6)$$

$$y = -2x^2 + 2x - 6$$

$$\boxed{b = 2}$$

$$5. a) (3x-1)(x-3)$$

$$b) x = \frac{1}{3}, x = 3$$

$$6. a) c = -4$$

$$b) f(x) = a(x+4)(x-1)$$

$$-4 = a(4)(-1)$$

$$a = 1$$

$$f(x) = (x+4)(x-1)$$

$$c) b = 3$$

$$8. a) \text{iii}$$

$$b) \text{iv}$$

$$c) \text{i}$$

$$d) \text{ii}$$