

3.)

$$i) x^2 + 9x + 14 = 0 \quad 2 \times 7$$

$$(x+2)(x+7)$$

$$x^2 + x + 2 = 0 \quad x+7=0$$

$$x = -2 \quad x = -7$$

$$4.) x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$17x^2 = -5x + 14$$

$$x = \frac{-5 \pm \sqrt{5^2 - 4(17)(14)}}{2(17)}$$

$$x = \frac{-5 \pm \sqrt{25 - 952}}{34}$$

$$x = \frac{-5 \pm \sqrt{927}}{34}$$

$$ii) x^2 - 7x + 10 = 0 \quad 5 \times 2$$

$$(x-2)(x-5)$$

$$x-2=0 \quad x-5=0$$

$$x=2 \quad x=5$$

$$iii) x^2 + 8x - 20 = 0$$

$$(x-2)(x+10) = 0$$

$$x-2=0$$

$$x+10=0$$

$$x=2$$

$$x=-10$$

$$iv) x^2 - 49 = 0$$

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

$$x+7=0 \quad x-7=0$$

$$x=-7 \quad x=7$$

$$v) 2x^2 - 3x - 20 = 0$$

5x4

$$(2x+5)(x-4) = 0$$

$$2x+5=0 \quad x = -\frac{5}{2}$$

$$x-4=0 \quad x=4$$

$$x=2.5$$

-2x10

$$x = 0.75$$

$$x = -1.04$$

$$5.) 6x + 5y = 35 \quad (1)$$

$$7x - 4y = 31 \quad (2)$$

$$60x + 5y + (-6x) = 35 + (-6x)$$

$$5y = -60x + 35$$

$$\frac{5y}{5} = \frac{-60x + 35}{5}$$

$$5.) 6x + 5y = 35$$

$$7x - 4y = 31$$

$$x=5$$

$$y=1$$

(Ran out of time to write workings)