

1) (i) $\frac{4}{3}$ (ii) $1\frac{1}{2}$ (iii) $\frac{1}{3}$

(3)

2) (i) $\frac{169}{20} \rightarrow 8\frac{9}{20}$

(ii) $\frac{95}{12} \rightarrow 7\frac{11}{12}$

(6)

3) (i) $(x+2)(x+3)$ $x = -2, -3$

(ii) $(x+2)(x-2)$ $x = \pm 2$

(iii) $(x+6)(x+1)$ $x = -6, -1$

(iv) $(x+4)(x+2)$ $x = -2, -4$

4
4
4
4

(16)

4)
$$x = \frac{-3 \pm \sqrt{(3)^2 - 4(9)(-9)}}{2(9)}$$

$$x = \frac{-3 \pm \sqrt{333}}{18}$$

$$x = \frac{-3 \pm 18.25}{18}$$

$$x = 0.85$$

$$x = -1.18$$

(7)

$$5) \quad x=1, y=2$$

5

$$6) \quad u = -5x - 2$$

$$\frac{u+2}{-5} = x$$

3

$$7) \quad (i) \quad x^{11}$$

$$(ii) \quad 27x^6$$

$$(iii) \quad x^{24}$$

$$(iv) \quad 30x^3$$

7

$$8) \quad (i) \quad x^4 + 2x^3 - x^2 + 3x + 1$$

$$(ii) \quad \cancel{x^2} + 7x + 12 - \cancel{x^2} - 2$$

$$= 7x + 10$$

8

$$9) \quad (i) \quad 12x + 24 = 9x + 6$$

$$3x = -18$$

$$x = -6$$

$$(ii) \quad 24x + 8 = 9x + 6$$

$$15x = -2$$

$$x = -0.13$$

8

Total 63