

Q3 (b)

(i)

Solve $\frac{8-3x}{3} = 5$

$$8-3x = 15$$

$$-3x = 7 \quad \therefore x = -\frac{7}{3}$$

Q3 (a)

Solve $3x(x+2)(2x-3) = 0$ $x=0, x=-2,$
 $x = \frac{3}{2}$

(b)

expand and simplify $(2x+2)(3x-1)$

$$6x^2 - 2x + 6x - 2$$

$$6x^2 + 4x - 2$$

(c)

Factorise

(i)

$$x^2 - 100 = (x-10)(x+10)$$

(ii)

$$4x^2 - 16$$

$$(2x+4)(2x-4)$$

(d)

Simplify

(i)

$$\frac{m}{2} + \frac{m}{9} = \frac{9m+2m}{18}$$

$$= \frac{11m}{18}$$

(ii)

$$100^{1/2} = \sqrt{100} = 10$$

(iii)

$$\frac{8x^3y^5}{18x^{-5}} = \frac{4x^3x^5y^5}{9}$$

$$= \frac{4x^8y^5}{9}$$

(iv)

$$\frac{7b}{c} - \frac{5c}{b^2} = \frac{7b^3 - 5c^2}{cb^2}$$

Q4 (a)

Solve

(i)

$$\frac{4x+6}{3} = \frac{7x+1}{2} \Rightarrow 2(4x+6) = 3(7x+1)$$

$$\Rightarrow 8x+12 = 21x+3$$

$$-13x = -9$$

$$x = -\frac{9}{-13}$$

$$x = \frac{9}{13}$$

(ii)

$$x^2 + 3x - 54 = 0$$

$$(x+9)(x-6) = 0$$