

Siobhan Aspinall
(ACHA3000)

1901089
3/11/20

14:53

(i) $x^4 \times x^6 \times x$
 x^{11}

(ii) $2x^2 \times 3x^3 \times 2x$
 $12x^6$

(iii) $\frac{x^4 \times x^3 \times x^2}{x^9}$

$$\frac{x^9}{x^9}$$

(iv) $\frac{x}{3x^9} (3x^2)^3$

(v) $\sqrt{x} \times \sqrt{x}$
 $\sqrt{x^2}$
 ~~$\sqrt{x^2}$~~

26) $15x - 2 = 12x + 9$
 $15x - 12x = 9 + 2$
 $3x = 11$
 $x = \frac{11}{3}$

Stephen Asplund
(ACHA3000)

1901059
3/11/20 15:01

$$201) 3(7x-1) = 6(x+3)$$

$$21x - 3 = 6x + 18$$

$$21x - 6x = 18 + 3$$

$$15x = 21$$

$$x = \frac{21}{15} \div 3$$

$$= \frac{7}{5}$$

$$(111) \frac{5x+3}{4} = \frac{2x-1}{9}$$

$$9(5x+3) = 4(2x-1)$$

$$45x + 27 = 8x - 4$$

$$45x - 8x = -4 - 27$$

$$37x = -31$$

$$x = \frac{-31}{37}$$

$$37$$

$$361) x^2 + 10x + 21 = 0 \quad 1 \times 21$$

$$(x+3)(x+7) = 0 \quad 3 \times 7$$

$$x = -3 \quad x = -7$$

$$(11) x^2 - 3x + 2 = 0 \quad 1 \times 2$$

$$(x-1)(x-2) = 0$$

$$x = +1 \quad x = +2$$

Stoohran Applend
(ACHA3000)

1901059
3/11/20 15:08

$$\begin{aligned} 3(i) \quad & x^2 + 12x + 20 = 0 \quad 1 \times 20 \\ & (x+2)(x+10) = 0 \quad 2 \times 10 \\ & x = -2 \quad x = -10 \end{aligned}$$

$$\begin{aligned} (iv) \quad & x^2 - 64 = 0 \\ & (x+8)(x-8) \\ & x = -8 \quad x = +8 \end{aligned}$$

$$\begin{aligned} (v) \quad & 2x^2 + 9x + 10 = 0 \quad 1 \times 10 \\ & 2(x+2)(x+5) = 0 \quad 2 \times 5 \\ & \cancel{10x+20} \\ & x = -2 \quad x = -5 \end{aligned}$$

$$\begin{aligned} 4 \quad & 14x^2 + 3x = 11 \\ & 14x^2 + 3x - 11 = 0 \\ & x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \\ & x = \frac{-3 \pm \sqrt{3^2 - 4 \times 14 \times -11}}{2 \times 14} \end{aligned}$$

$$x_+ = 0.79 \quad x_- = -1.00$$

Siobhan Appled
ACHA3000

1901059

31/1/20

15.18

$$5.2 \quad 5x + 3y = 39 \quad (1)$$

$$3 \quad 8x - 2y = 42 \quad (2)$$

$$~~13x - 11y = 150~~$$

$$10x + 6y = 78 \quad (3)$$

$$24x - 6y = 126 \quad (4)$$

$$\hline 34x = 204$$

$$x = \frac{204}{34}$$

$$x = 6$$

$$5(6) + 3y = 39$$

$$30 + 3y = 39$$

$$3y = 39 - 30$$

$$3y = 9$$

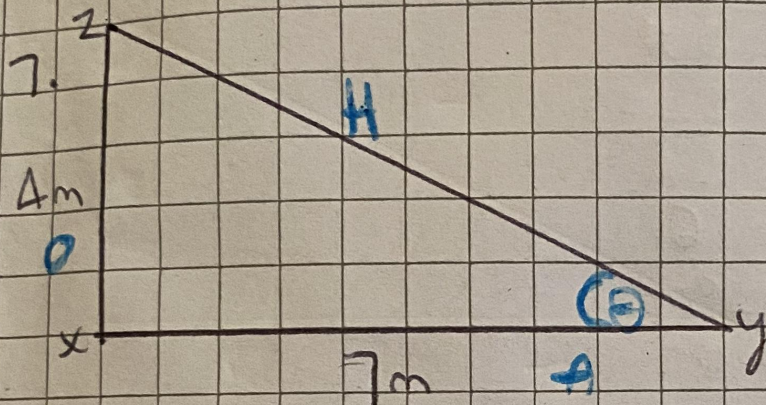
$$y = \frac{9}{3}$$

$$y = 3$$

6. $5(2x^2 - y^2) - x^2(x^2 - y) - x^2y - x^4$

$$10x^2 - 5y^2 - x^4 - x^2y - x^2y - x^4$$

$$10x^2 - 5y^2 - x^4 - x^2y - x^2y - x^4$$



SOH
CAH
TOA

(i) Angle ψ

$$\tan \theta = \frac{O}{A}$$

$$\theta = \tan^{-1} \left(\frac{O}{A} \right)$$

$$\theta = \tan^{-1} \left(\frac{7}{4} \right)$$

$$= 60.26^\circ$$

(ii) Angle Z

$$Z = 180 - 90 - 60.26$$

$$= 29.74$$

(iii) ψ Z

$$C^2 = a^2 + b^2$$

$$C = \sqrt{a^2 + b^2}$$

$$= \sqrt{4^2 + 7^2}$$

$$= 8.06m$$