

4.5.22 Oliver Spears 2004454 Exam

i) $x^4 \times x^2 \times x^5 \times x =$ ~~x^{11}~~ x^6

ii) $9x^4 \times 2x^4 = 18x^8$

iii) $x^5 \times x^2 \times x = 4x$

iv) $x^{0.5} \times x^{0.5} = x$

2)

i) $4x - 5 = 7x + 1$

$4x = 7x + 6$

$3x = -6$

$x = -2$

ii) $5(2x+1) = 12(3x-2)$

$10x+5 = 36x-24$

$29 = 26x$

$x = \frac{29}{26}$

$x = 1.12$

iii) $\frac{5}{(x+1)} = \frac{2}{(x-1)}$ cross multiply

$5x - 5 = 2x + 2$

$5x = 2x + 7$

$3x = 7$

$x = \frac{7}{3}$

$x = 2\frac{1}{3} \equiv x = 2.3$

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③ i) $x^2 + 7x + 10 = 0$
 $(x+5)(x+2)$

$x = -5, x = -2$

ii) $x^2 + 4x$

iii) $x^2 + 46x + 9 = 0$
 $(x-4)(x-3)$

$x = 4, x = 3$

iv) $x^2 + 11x + 10 = 0$

$(x+10)(x+1)$

$x = -10, x = -1$

v) $x^2 - 64 = 0$
 $(x+8)(x-8)$

$x^2 + 8x - 8x - 64$

$x = -8, x = 8$

④

$-2 \pm \sqrt{2^2 - (4 \times 10 \times -11)}$

2×10

$x = 0.95, x = -1.15$

⑤

$2x + 3y = 11$

$4x + 2y = 18$

$\times 2$

$4x + 6y = 22$

$-4x + 2y = 18$

$4x + 2 = 18$

$4x = 16$

$x = 4$

$4y = 4$

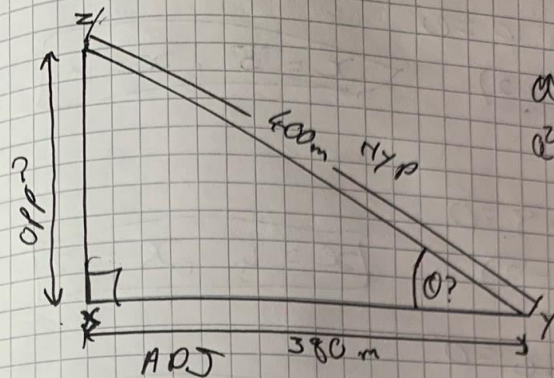
$y = 1$

Qu

⑥

$10x^2y + 5x^2y^2$
 $5x^2y(2+y)$

7



$$a^2 + b^2 = c^2$$

S°H C°H T°A

$$(ZY)^2 = (ZX)^2 + (XY)^2$$

$$(-XY)^2 + (ZX)^2 = (ZY)^2$$

$$-380^2 + 400^2 = 15600$$

$$\sqrt{15600} = 125 \text{ m rounded}$$

Angle at Y (θ)

S°H C°H T°A

$$\sin \theta = \frac{O}{H}$$

$$\sin \theta = \frac{125}{400}$$

$$\theta = \sin^{-1} \frac{125}{400} = 18.2^\circ$$