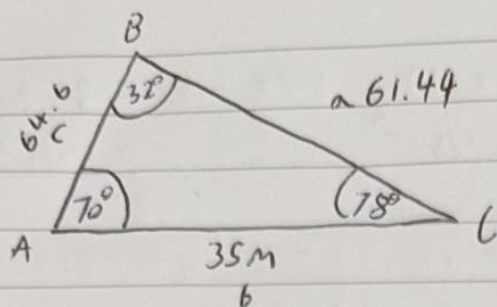


2)



SOM COA

$$\frac{\sin(78)}{AB} = \frac{\sin(32)}{35} \quad \overline{AB} = \frac{\sin(78) \times \sin(32)}{35}$$

$$\frac{0.98 \times 0.015}{35} = \frac{\sin 35}{\sin(32) \sin(78)} = \overline{AB}$$

ii

$$\sin 35 \times \sin(78) = \overline{AB} = \underline{64.6m}$$

iii

$$a^2 + b^2 - 2ab \cos A \rightarrow a^2 = 35^2 + 64.6^2 - 2(35)(64.6) \cos(70)$$

$$a^2 = 35^2 + 64.6^2 - 2(35)(64.6) \cos(70) = \underline{61.44}$$

3) i) $\sin x = 0.67$

$$x = 42.07 \quad 180 - 42.07 = x = 137.93$$

ii $\tan^2 x - 7 \tan x + 10 = 0$

4) $y = 5x^2 + 12x - 14 \rightarrow 5x^2 + 12x - 14$

$$y = 4x^2 + 3x - 4 \quad 16x^2 + 12x - 16 \quad 20x^2 + 15x - 20$$

$$y = 4(2.3)^2 + 3(2.3) - 4$$

$$\underline{y = 24.06}$$

$$33x - 76 = 0$$

$$33x = -76 \quad 33x = -\frac{76}{33}$$

$$\underline{x = -\frac{76}{33} = -2.30}$$

5) i) $(3+7j) + (2-10j)$

$$\underline{(5-3j)}$$

ii $3+7j - 2+10j$

$$\underline{(1+17j)}$$

iii $\frac{3+7j}{2-10j} = \underline{(1.5-0.7j)}$

6) $7x^2 + 2x + 11 = 0$