

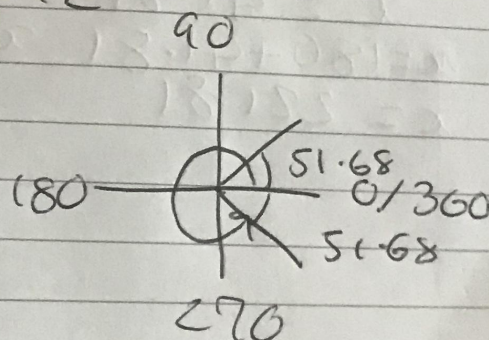
$$\begin{aligned}
 \text{(iv)} \quad x^2 - 256 &= 0 \\
 x^2 - 256 + 256 &= 0 + 256 \\
 x^2 &= 256 \\
 x &= \pm \sqrt{256} \\
 x &= 16 \text{ or } x = -16
 \end{aligned}$$

Question 3

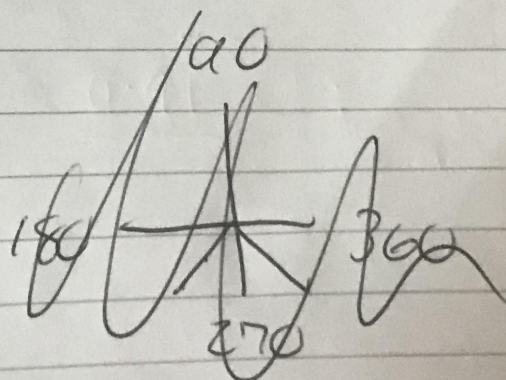
$$\begin{aligned}
 \text{a)} \quad 12x^2 &= 31x + 15 \\
 12x^2 - 31x - 15 &= 0 \\
 \text{a} \quad \text{b} \quad \text{c}
 \end{aligned}$$

$$\begin{aligned}
 x &= \frac{-31 \pm \sqrt{31^2 + 4 \times 12 \times -15}}{2 \times 12} \\
 x &= \frac{-31 + \sqrt{31^2 + 4 \times 12 \times -15}}{2 \times 12} \quad \text{or} \quad x = \frac{-31 - \sqrt{31^2 + 4 \times 12 \times -15}}{2 \times 12} \\
 x &= 3 \quad \text{or} \quad x = -\frac{5}{12} \\
 &= -0.42
 \end{aligned}$$

$$\begin{aligned}
 \text{b) i)} \quad \cos x &= 0.62 \\
 x &= \cos^{-1}(0.62) \\
 x &= 51.68^\circ \\
 x &= 360 - 51.68 \\
 x &= 308.32^\circ
 \end{aligned}$$



$$\begin{aligned}
 \text{ii)} \quad 7 \sin x &= 4 \\
 \sin x &= \frac{4}{7} \\
 x &= \sin^{-1}\left(\frac{4}{7}\right)
 \end{aligned}$$



$$\begin{aligned}
 x &= 34.85^\circ \\
 x &= 180 - 34.85 \\
 x &= 145.15^\circ
 \end{aligned}$$