

1.4 Answers to 1.3 Exercise

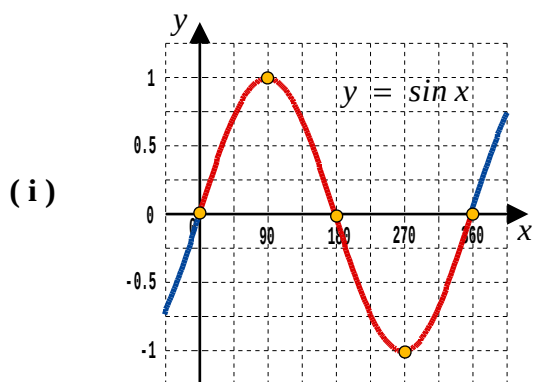
Additional Mathematics A-Level Pure Mathematics : Year 1 Trigonometry IV

Answer 1

(a) $65.4^\circ, 294.6^\circ$ (b) $136.7^\circ, 223.3^\circ$

[4, 4 marks]

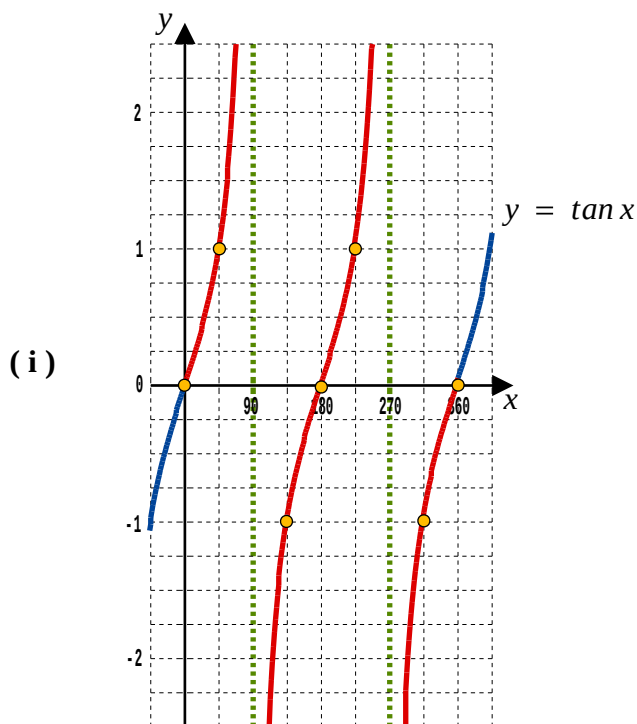
Answer 2



(ii) (a) $38.5^\circ, 141.5^\circ$ (b) $202.5^\circ, 337.5^\circ$ (c) $43.6^\circ, 136.4^\circ$

[2, 2, 2, 2 marks]

Answer 3



(ii) (a) $78.0^\circ, 258.0^\circ$ (b) $125.9^\circ, 305.9^\circ$ (c) $36.0^\circ, 216.0^\circ$

[2, 2, 2, 2 marks]

Answer 4

$$\sin x = -4 \cos x$$

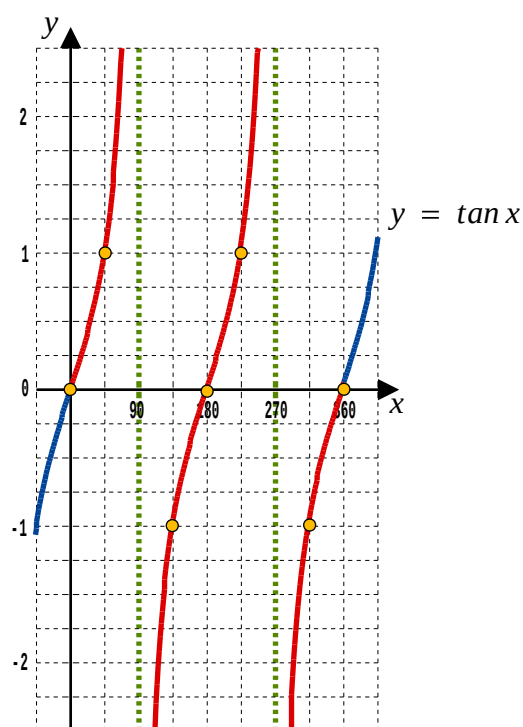
Divide both sides by $\cos x$

(which is OK as $\cos x = 0$ is not a solution)

$$\frac{\sin x}{\cos x} = -4$$

$$\tan x = -4$$

$$x = \arctan(-4)$$



$$x = 104^\circ, 284^\circ$$

[6 marks]