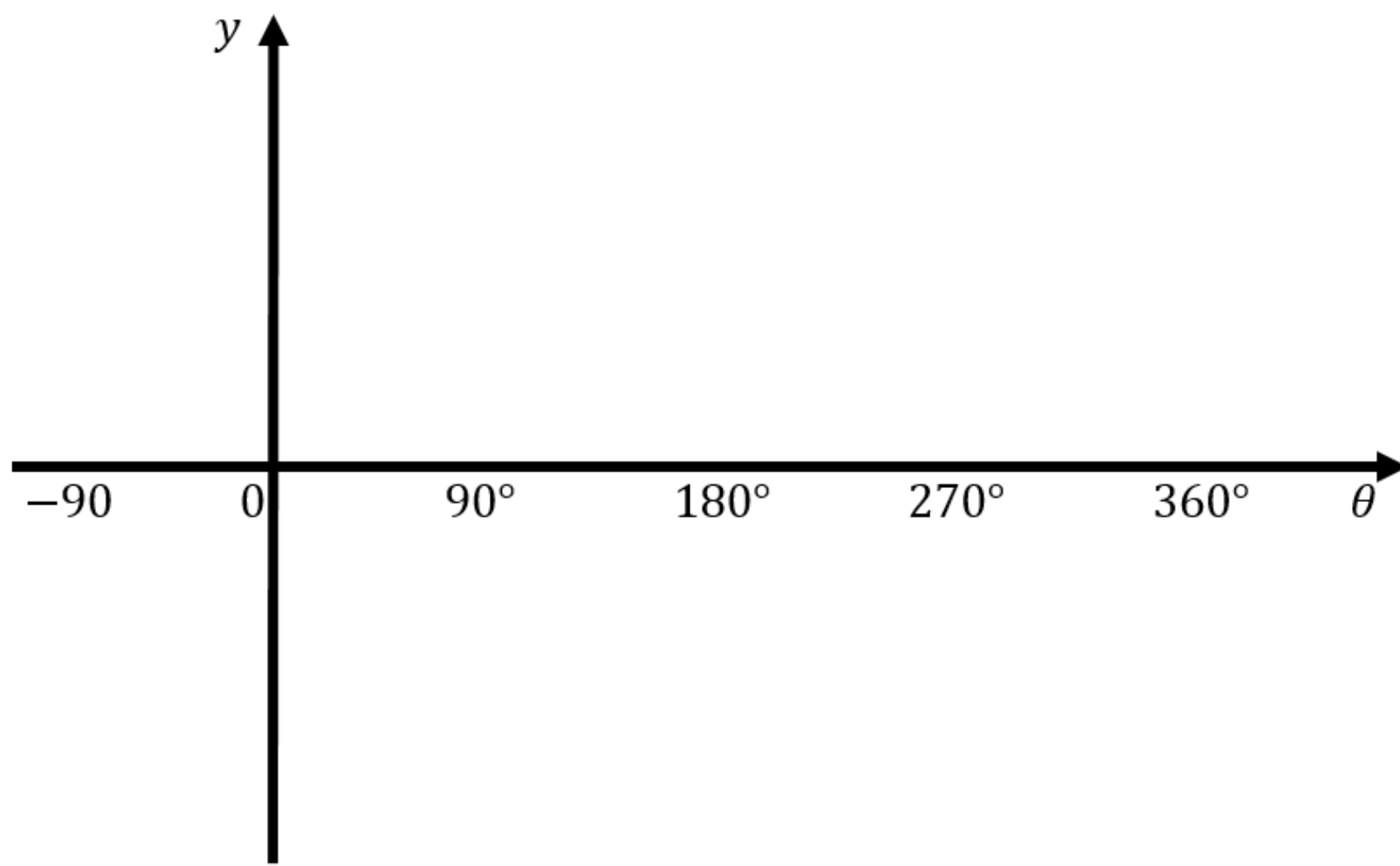
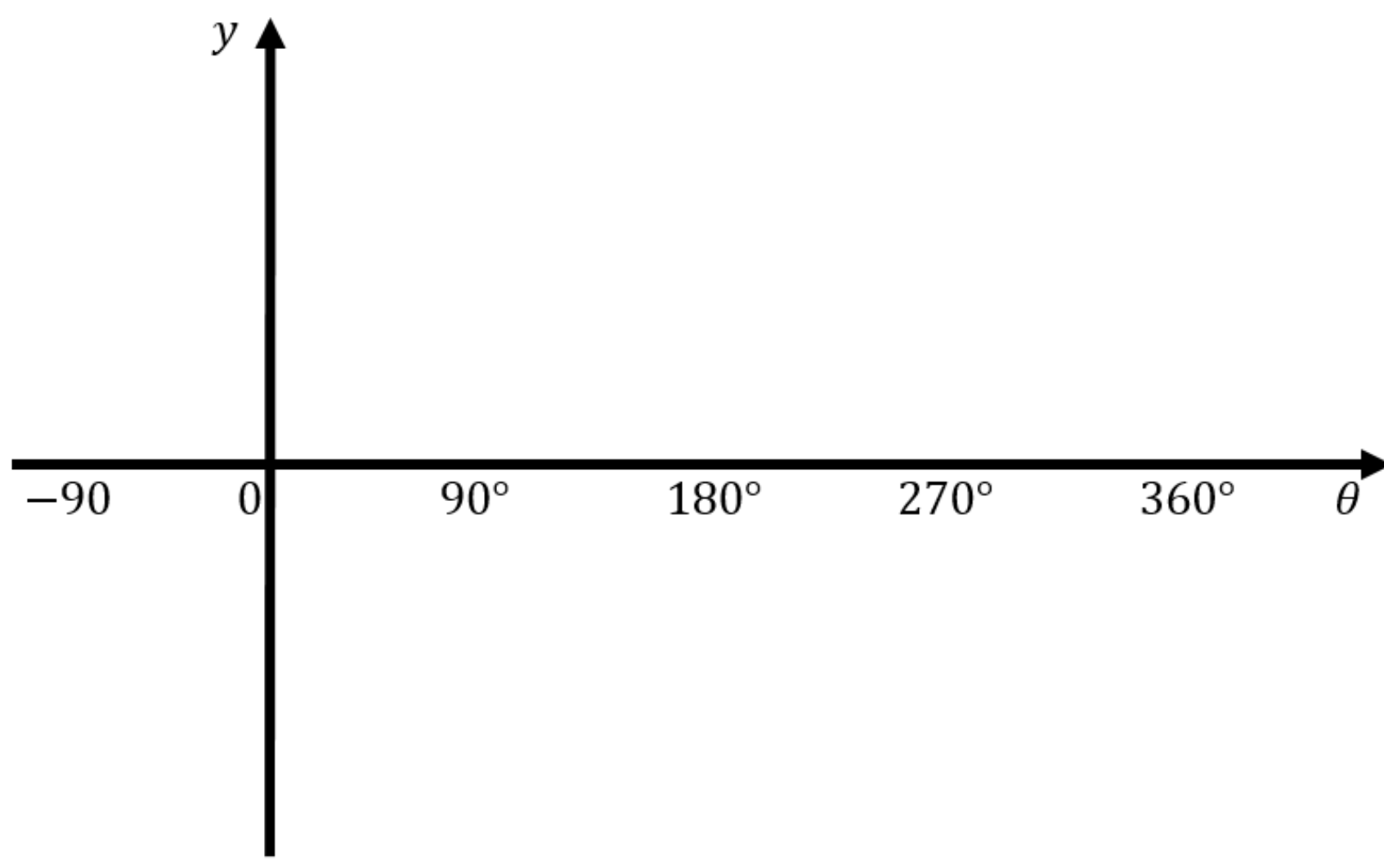


1 Solve the following equations for $0^\circ \leq \theta \leq 360^\circ$. Give answers to 1 decimal place where necessary.

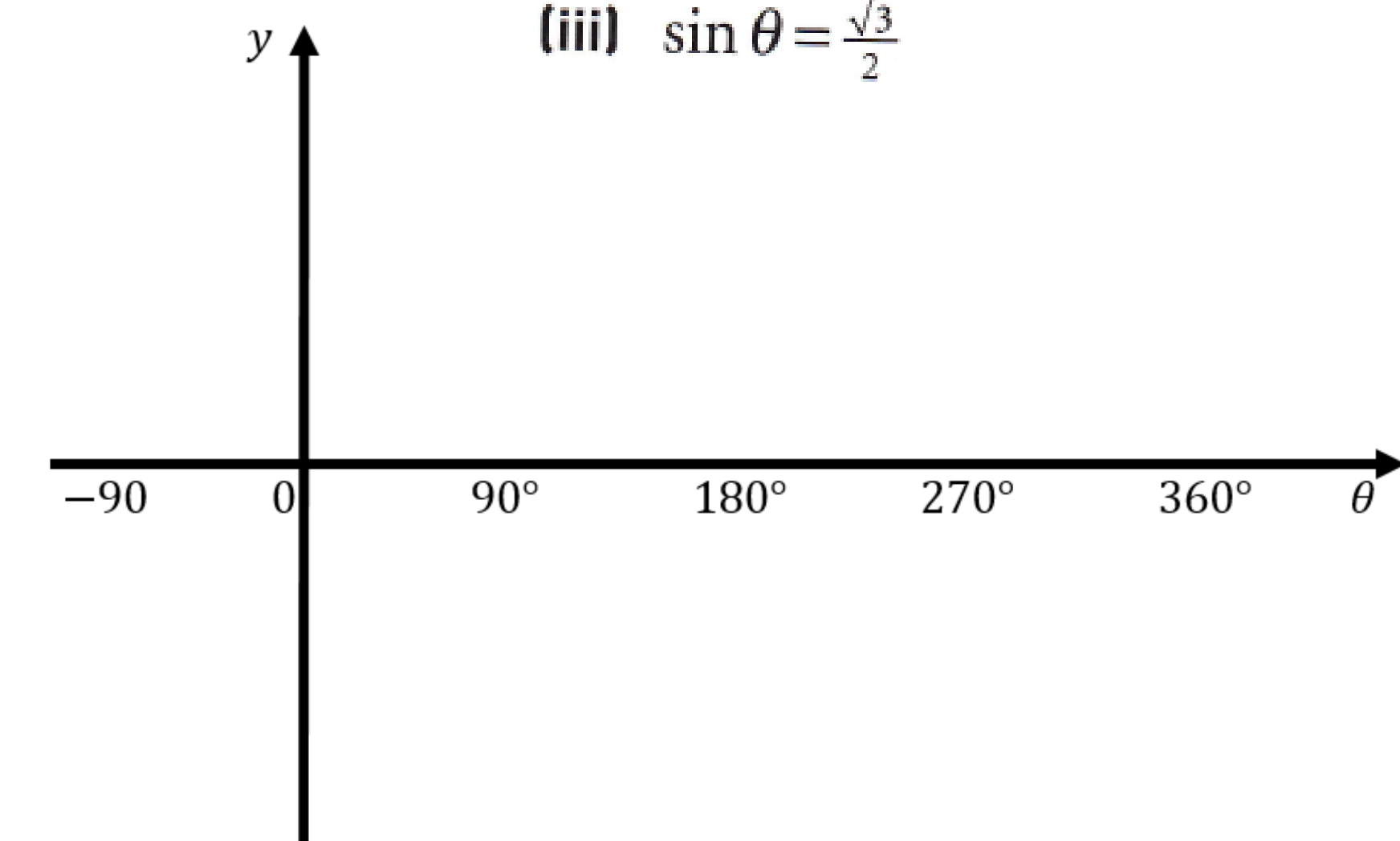
(i) $\cos \theta = 0.5$



(ii) $\tan \theta = 1$

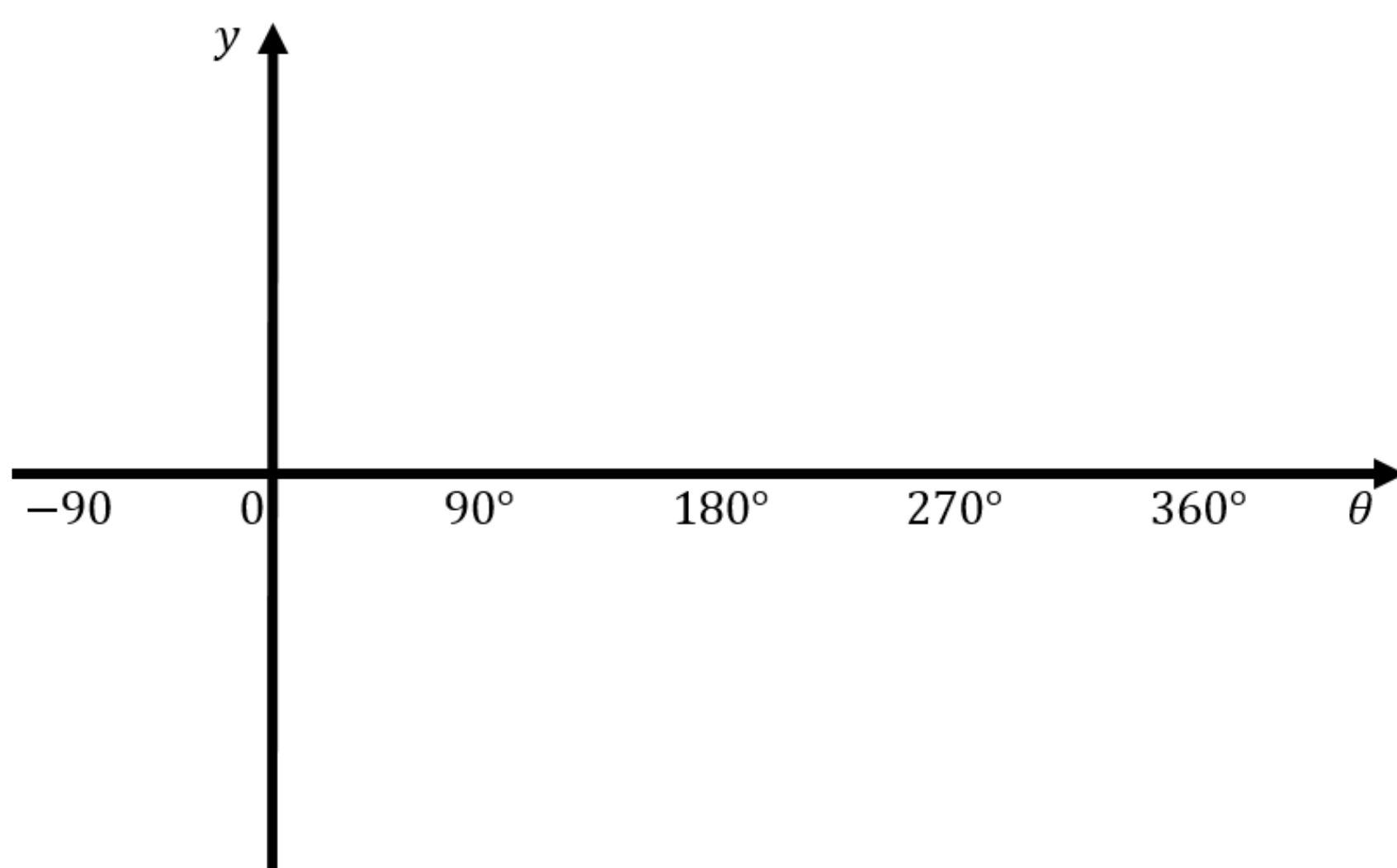


(iii) $\sin \theta = \frac{\sqrt{3}}{2}$

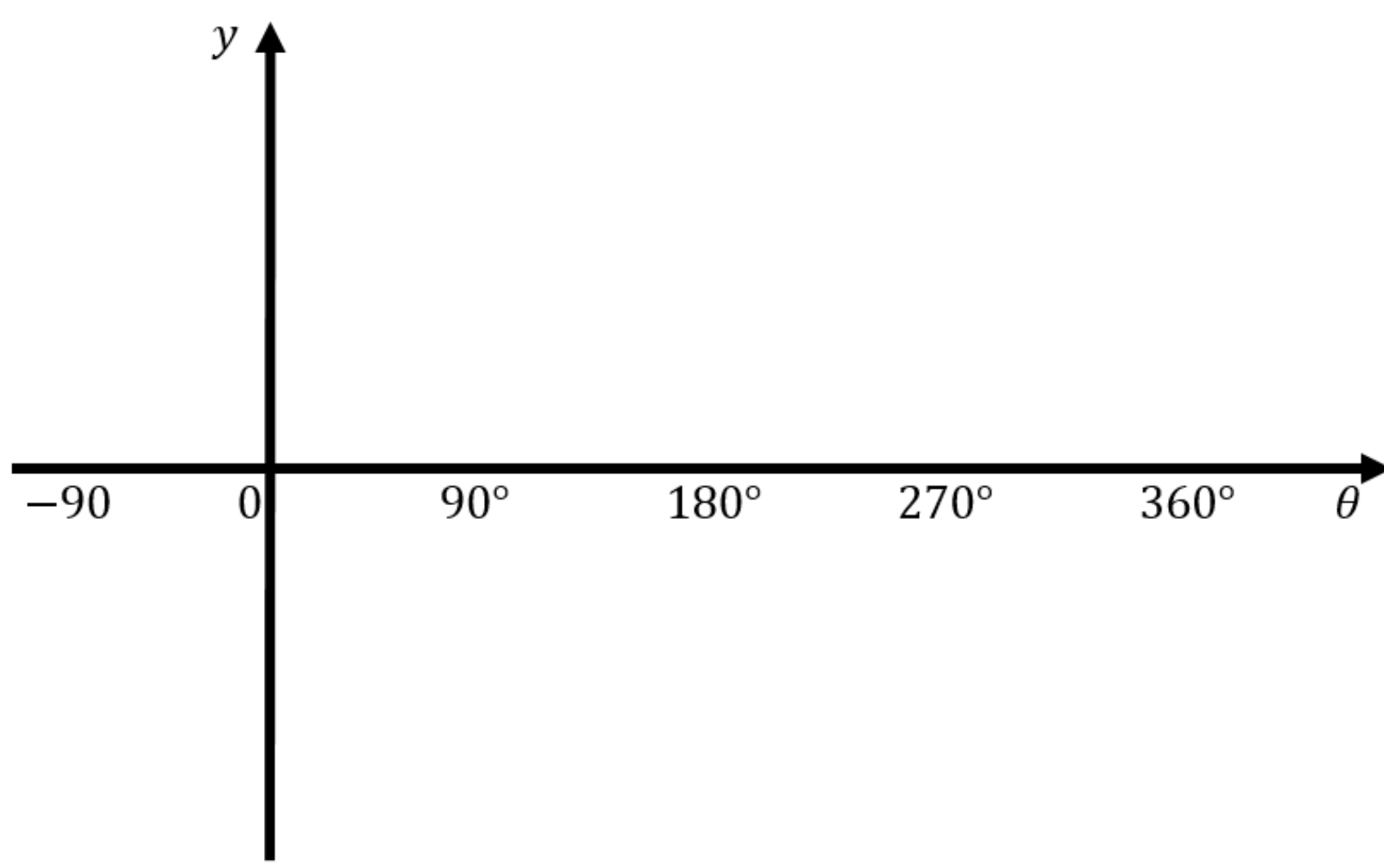


1 Solve the following equations for $0^\circ \leq \theta \leq 360^\circ$. Give answers to 1 decimal place where necessary.

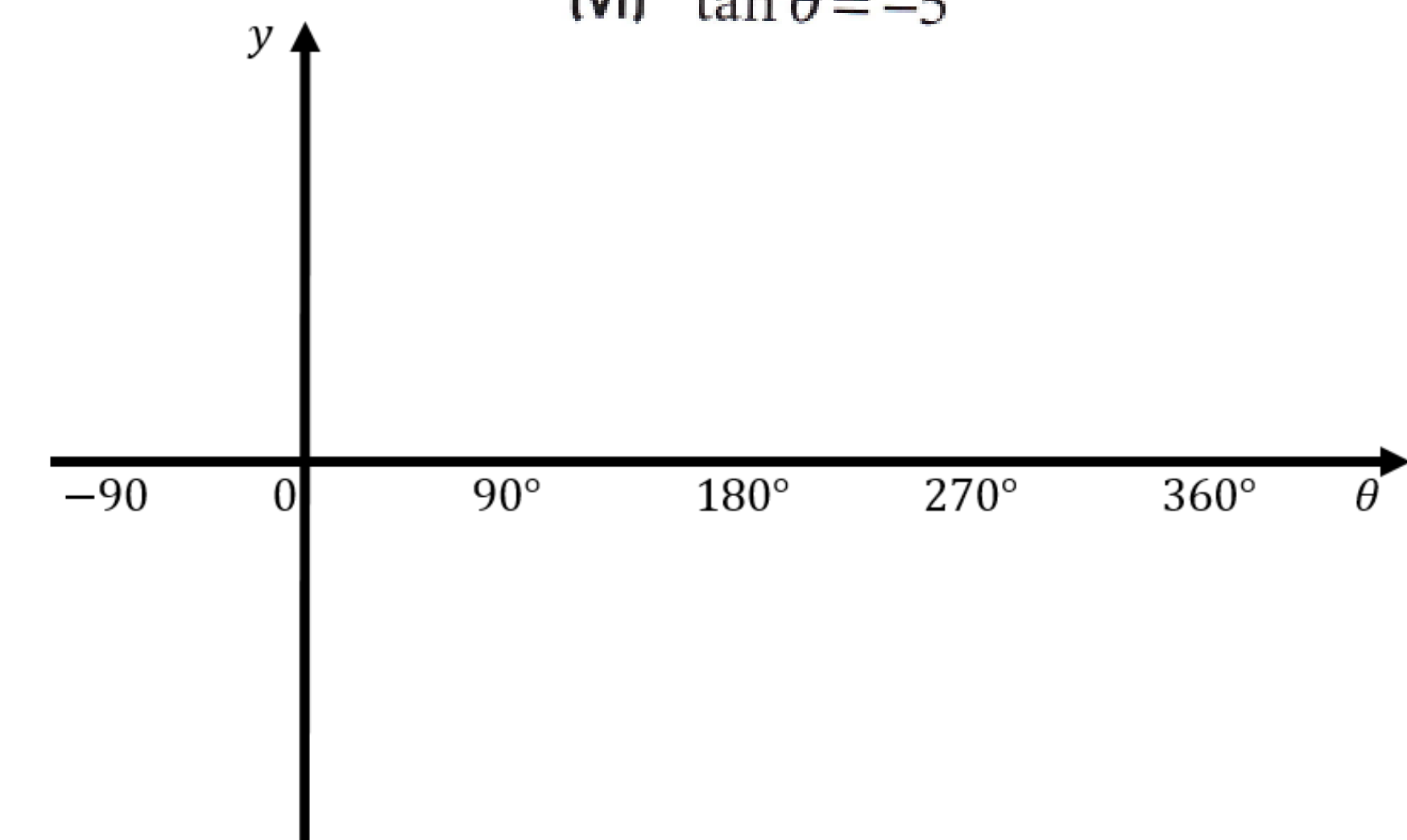
(iv) $\sin \theta = -0.5$



(v) $\cos \theta = 0$

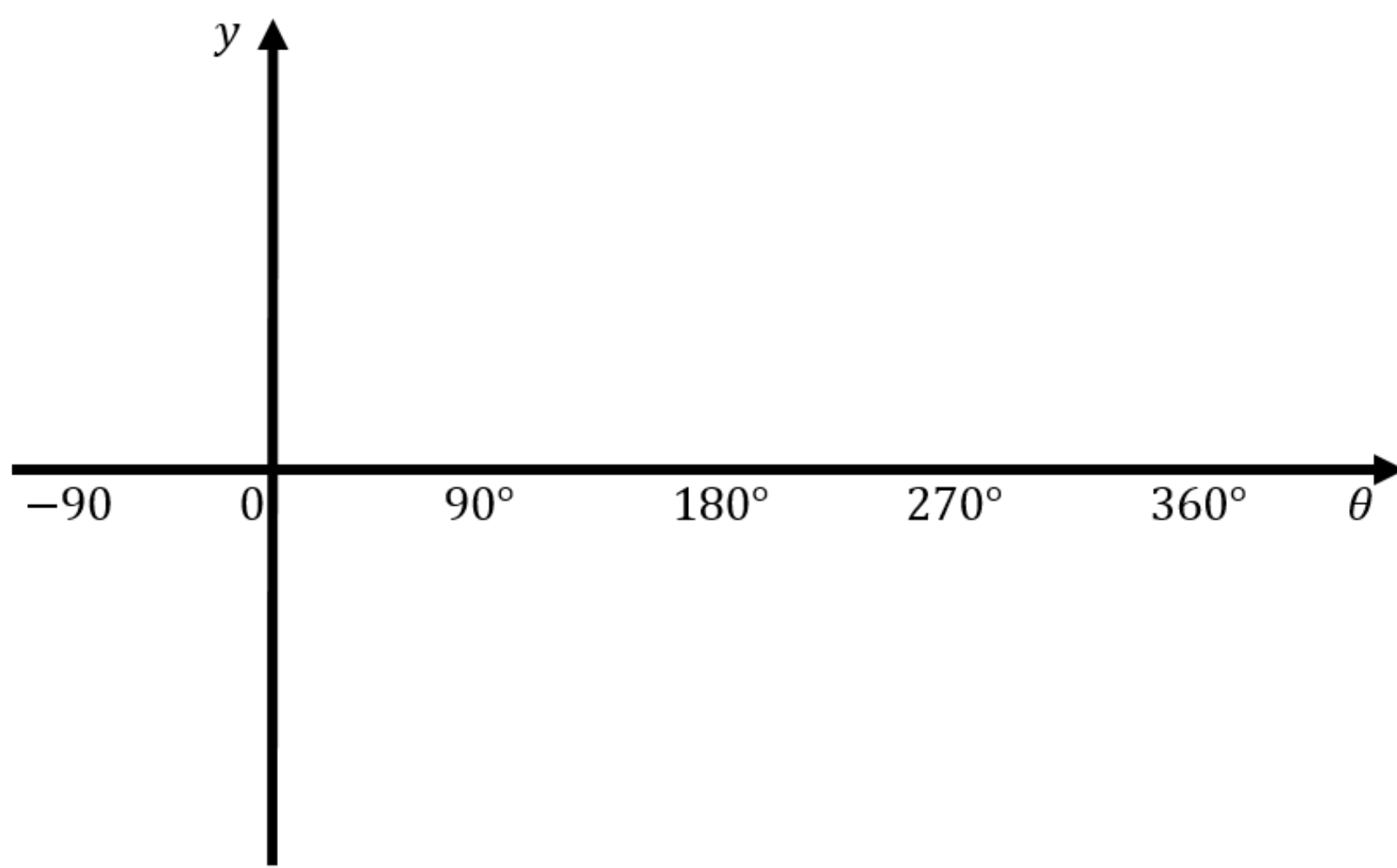


(vi) $\tan \theta = -5$

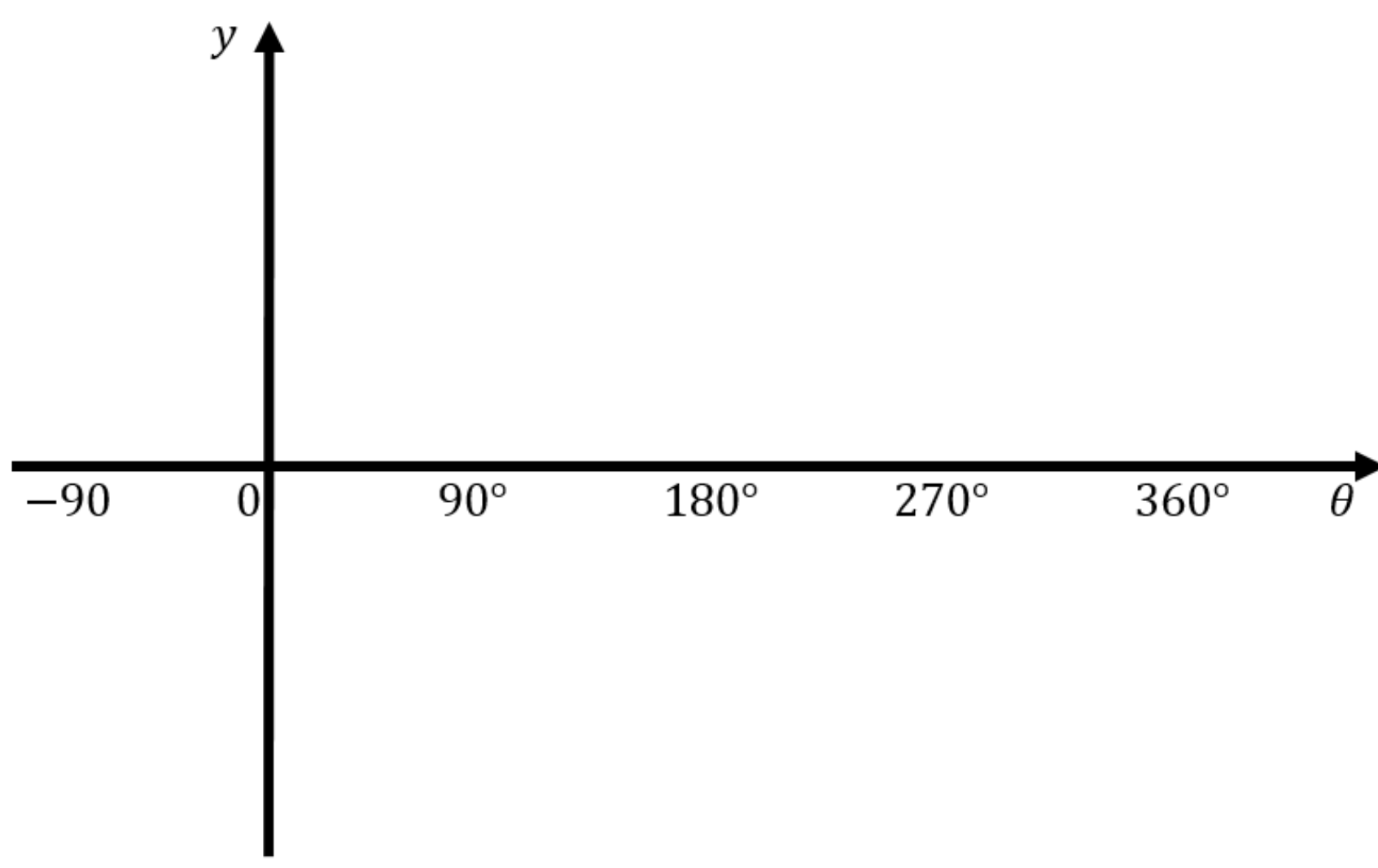


1 Solve the following equations for $0^\circ \leq \theta \leq 360^\circ$. Give answers to 1 decimal place where necessary.

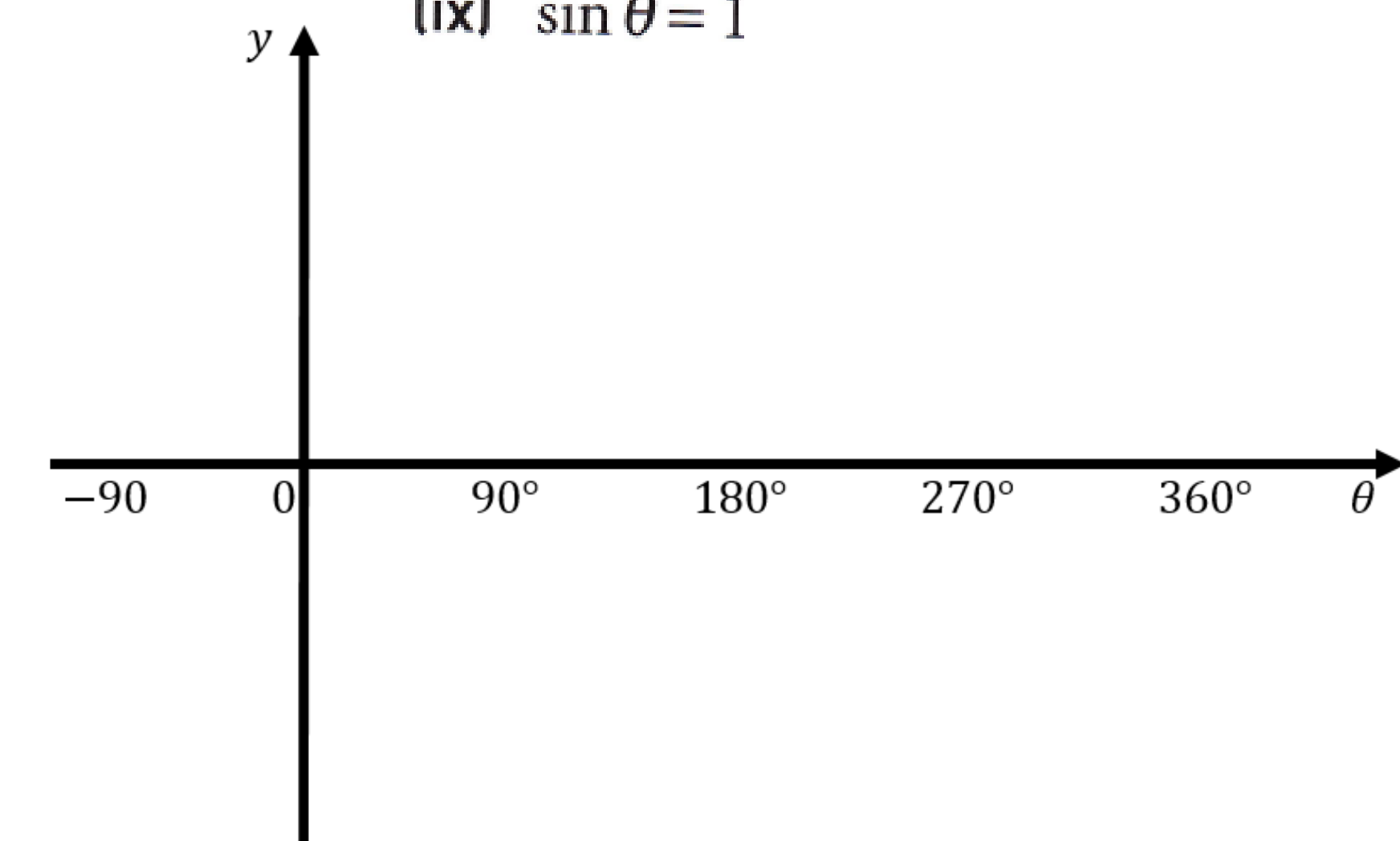
(vii) $\tan \theta = 0$



(viii) $\cos \theta = -0.54$

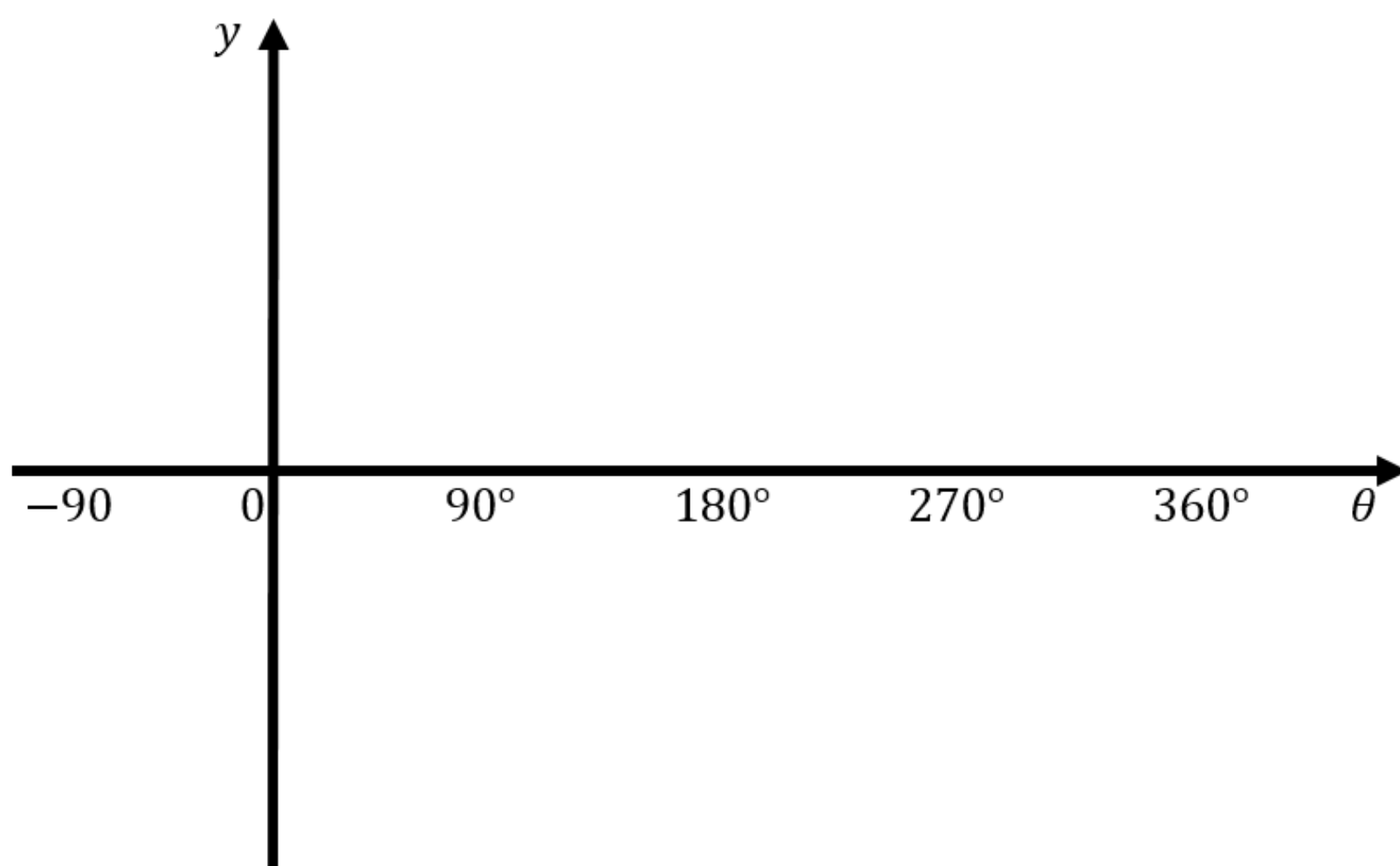


(ix) $\sin \theta = 1$

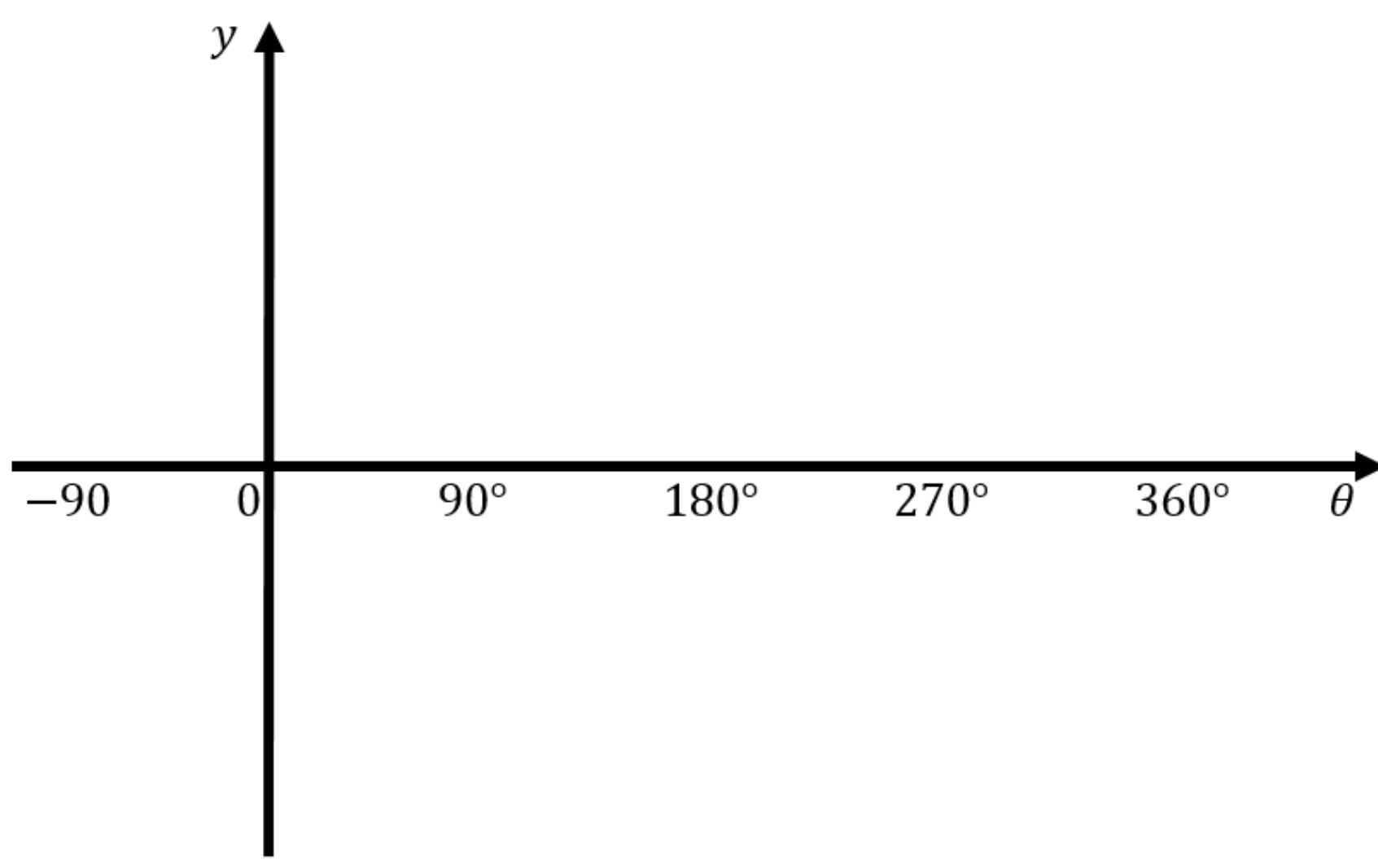


2 Solve the following equations for $0^\circ \leq \theta \leq 360^\circ$. Give your answers to 1 decimal place where necessary.

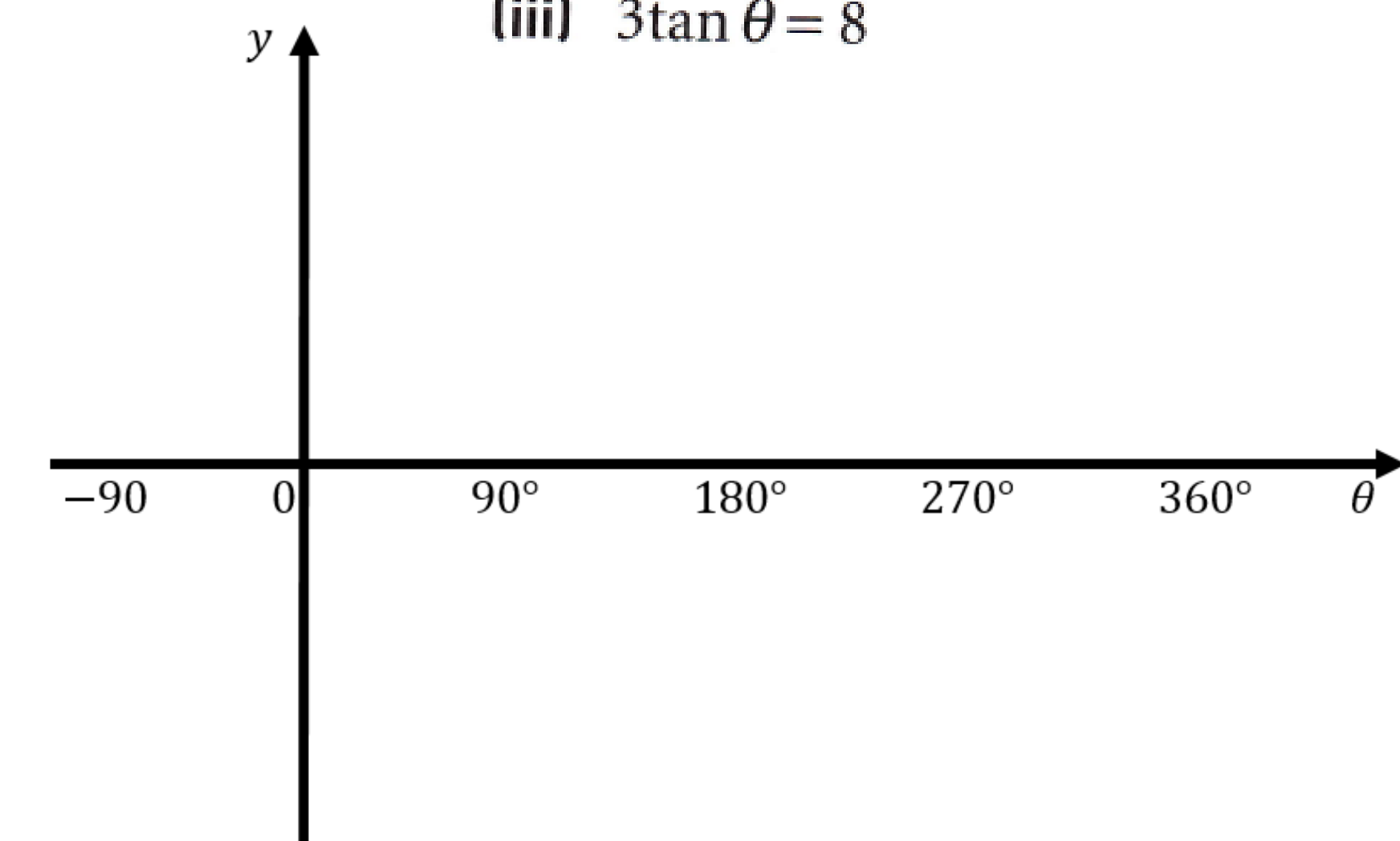
(i) $3\cos \theta = 2$



(ii) $7\sin \theta = 5$

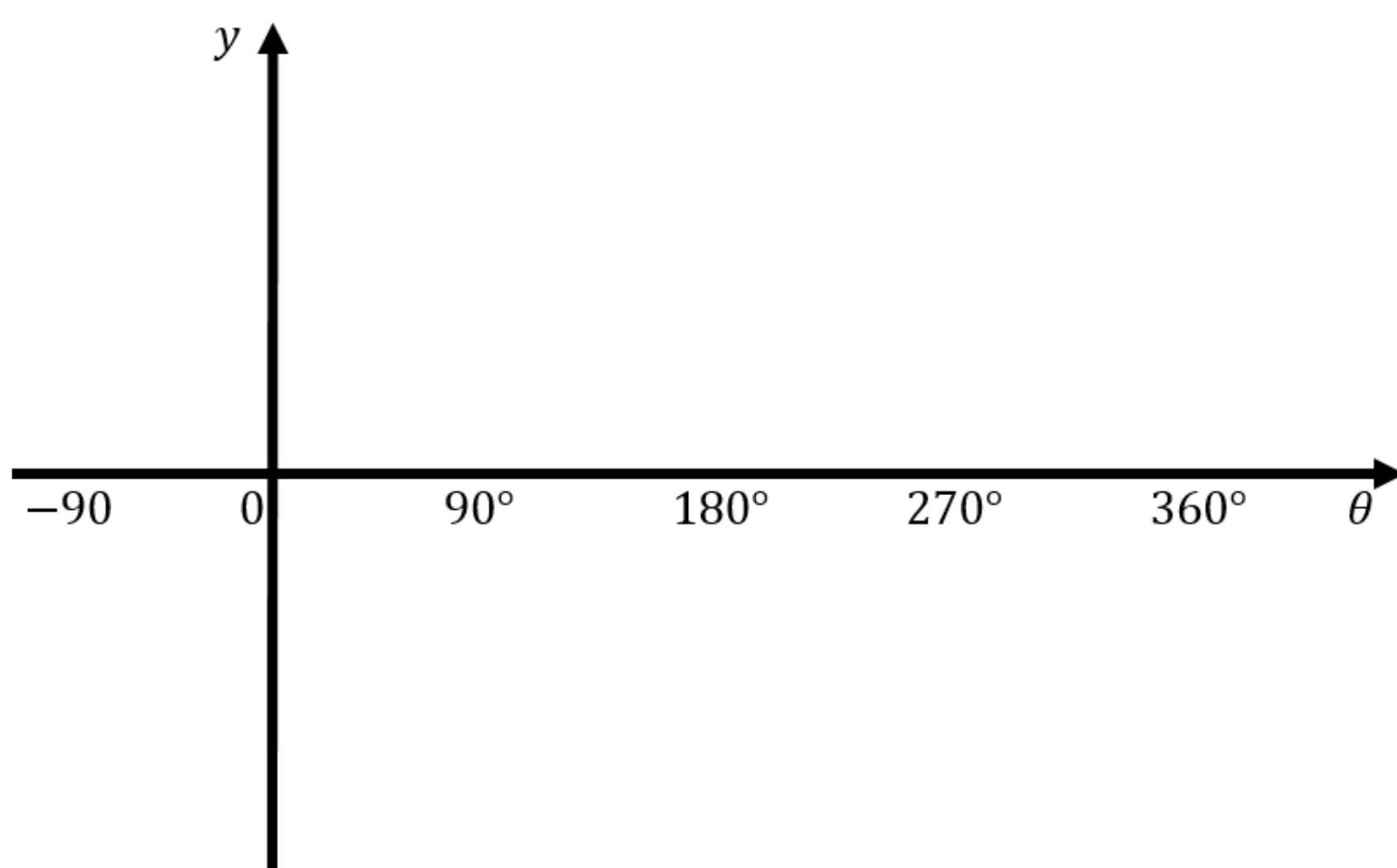


(iii) $3\tan \theta = 8$

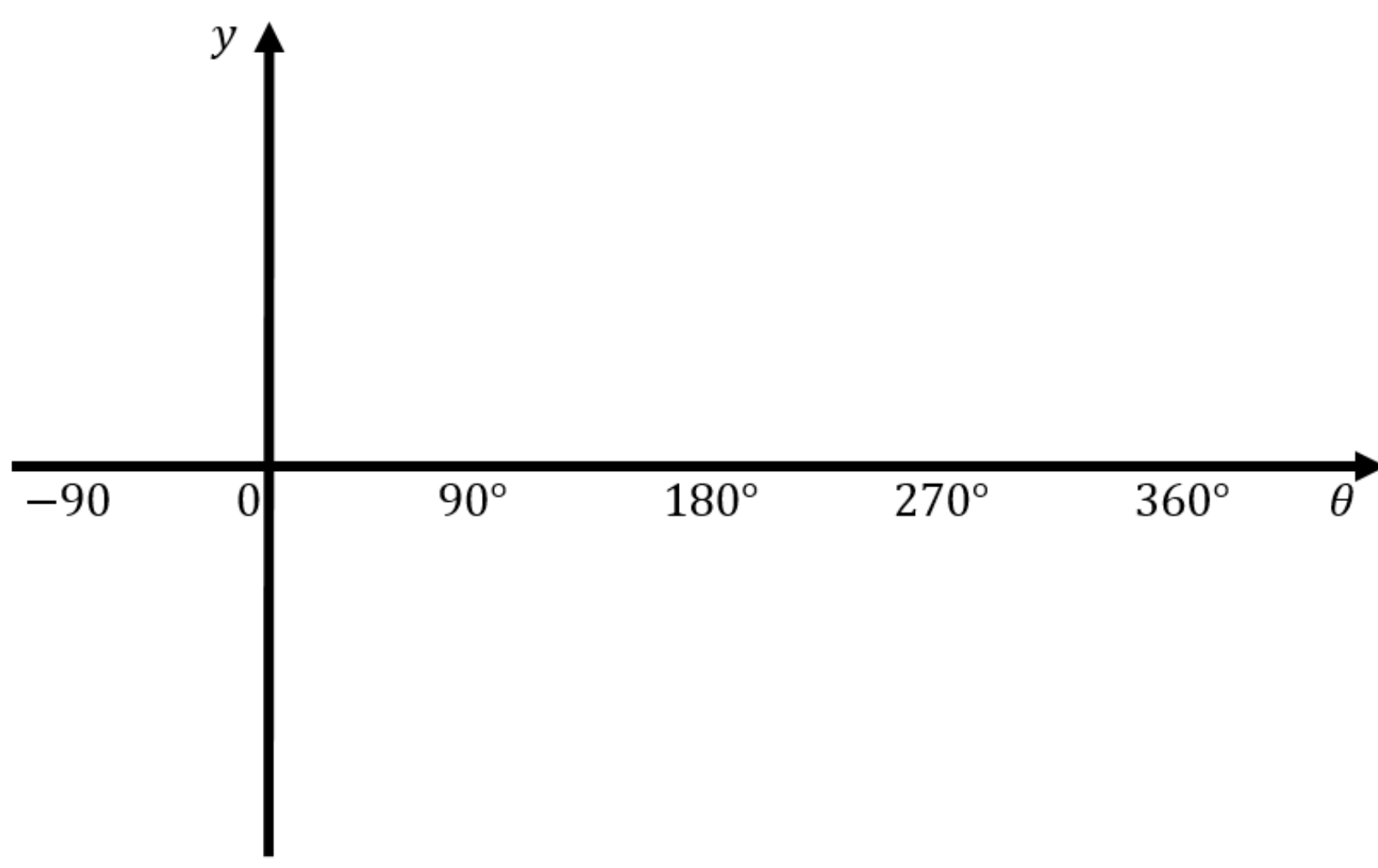


2 Solve the following equations for $0^\circ \leq \theta \leq 360^\circ$. Give your answers to 1 decimal place where necessary.

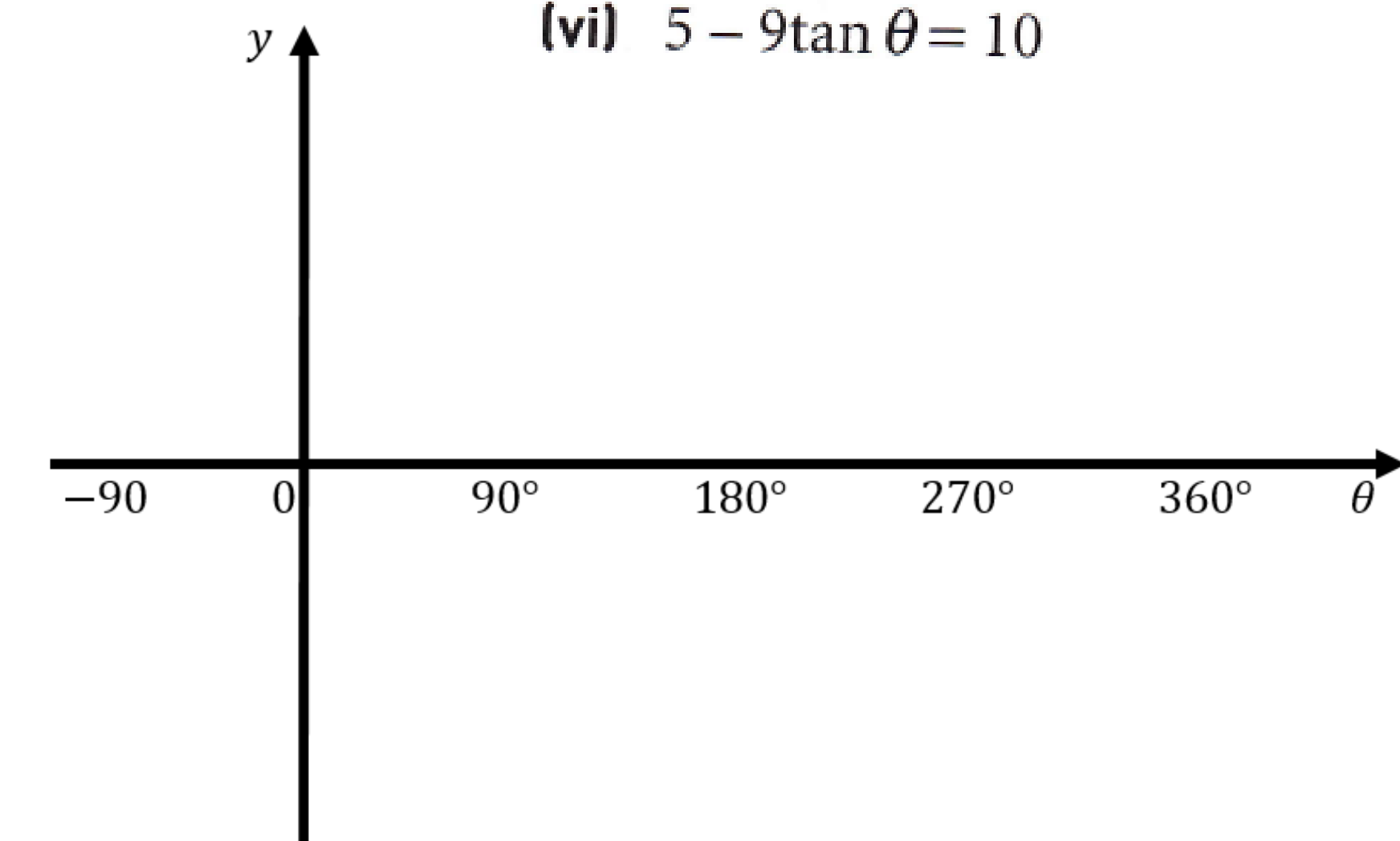
(iv) $6\sin \theta + 5 = 0$



(v) $5\cos \theta + 2 = 0$

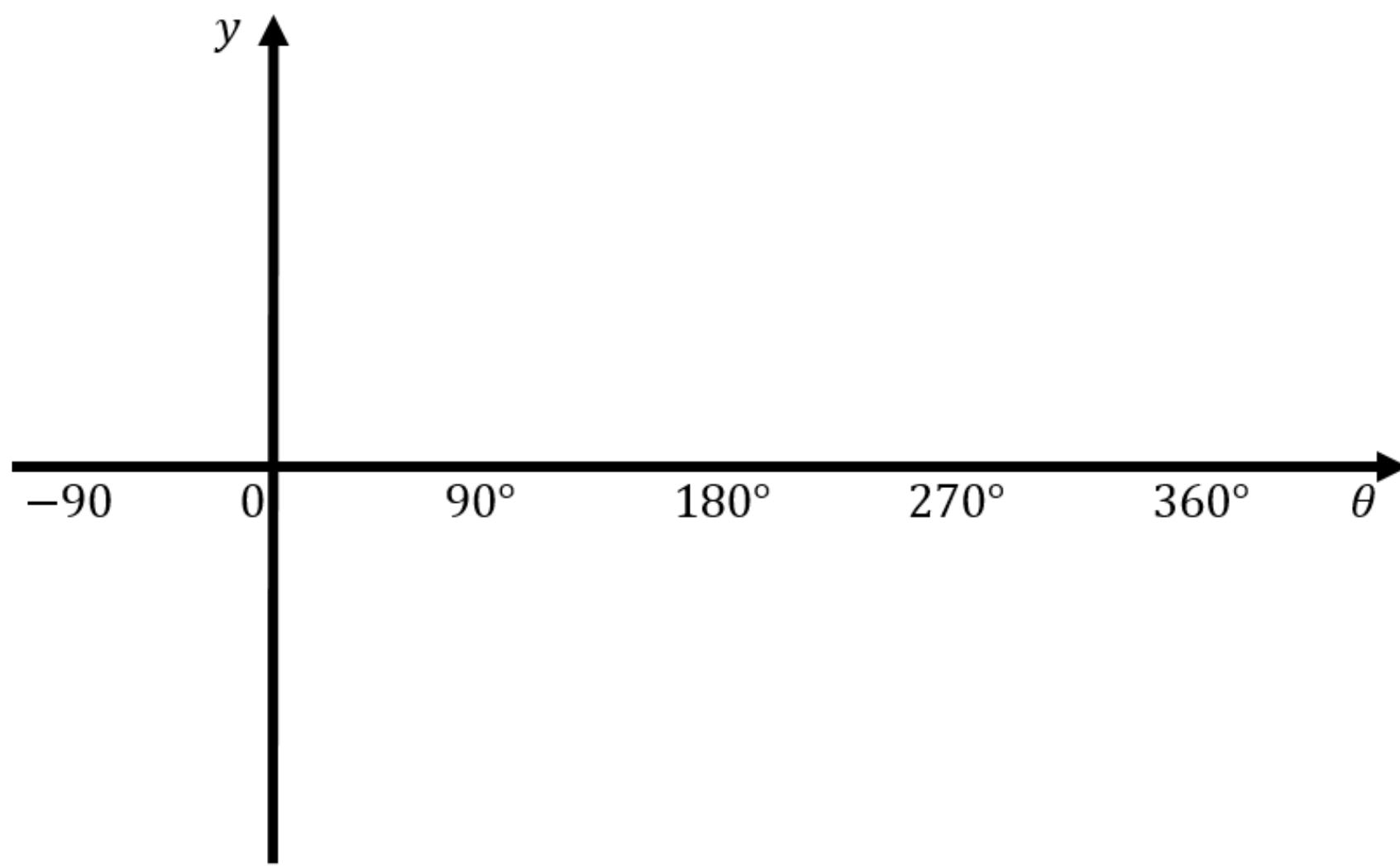


(vi) $5 - 9\tan \theta = 10$

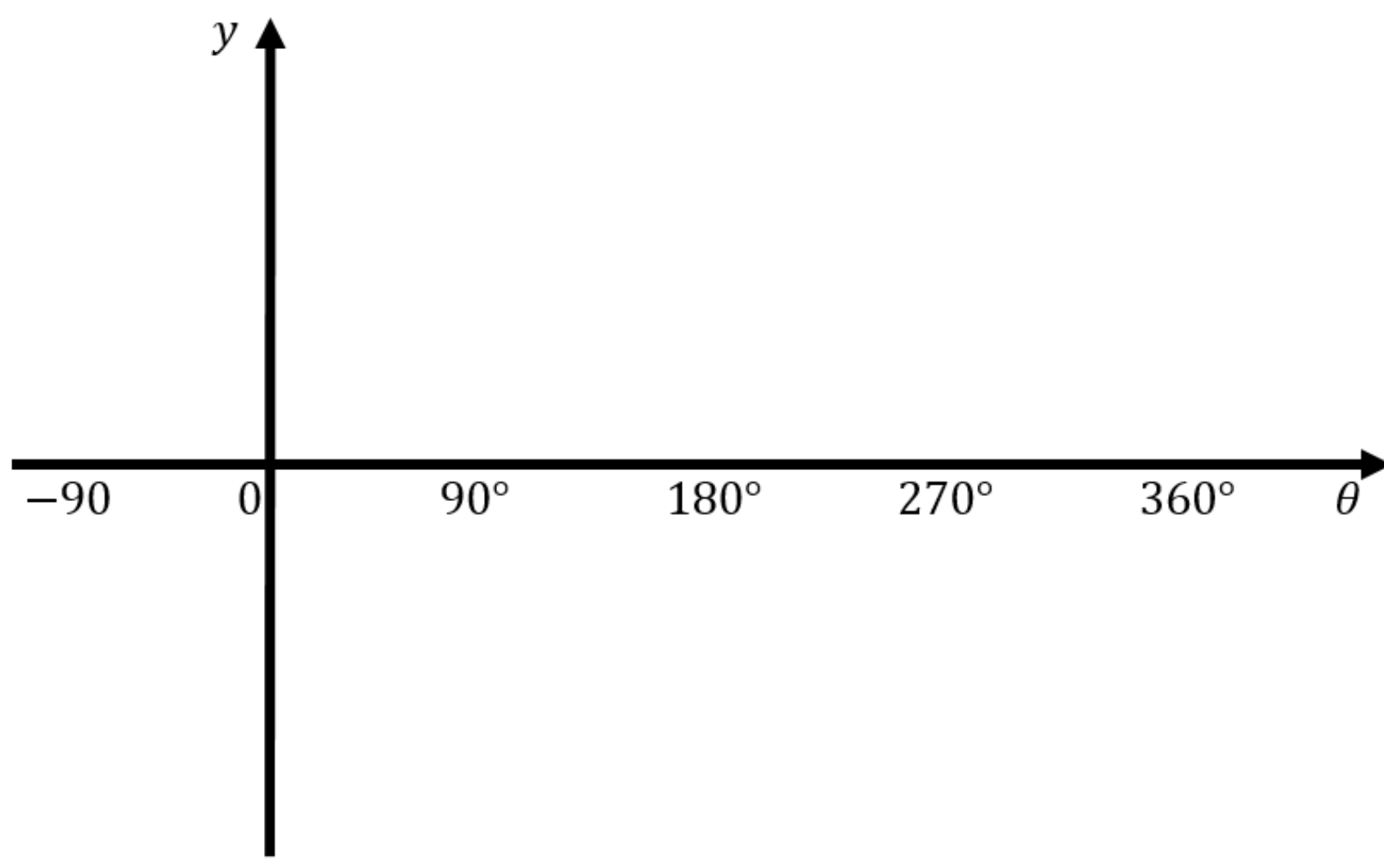


3 Solve the following equations for $0^\circ \leq \theta \leq 360^\circ$.

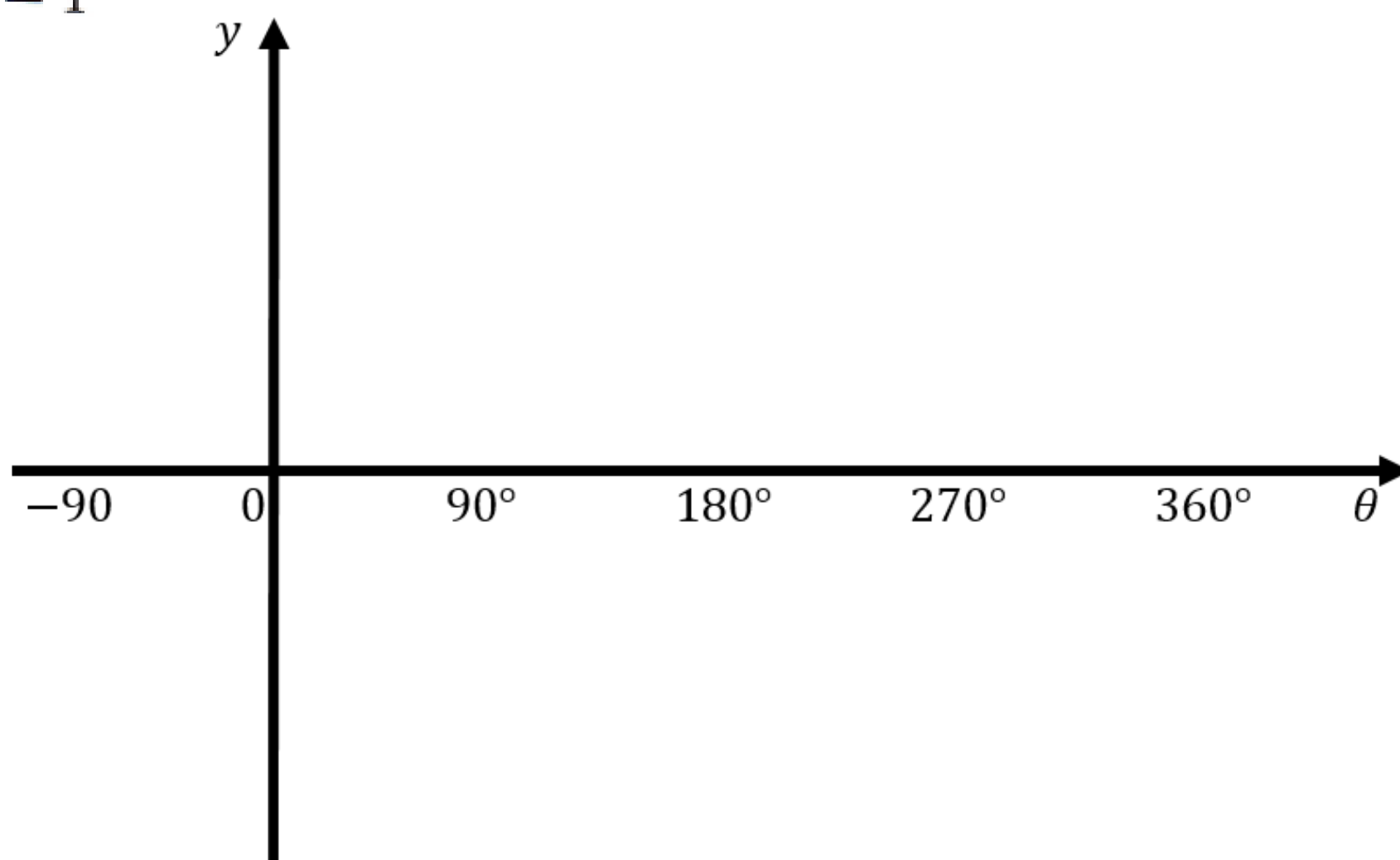
(i) $\sin^2 \theta = 0.75$



(ii) $\cos^2 \theta = 0.5$

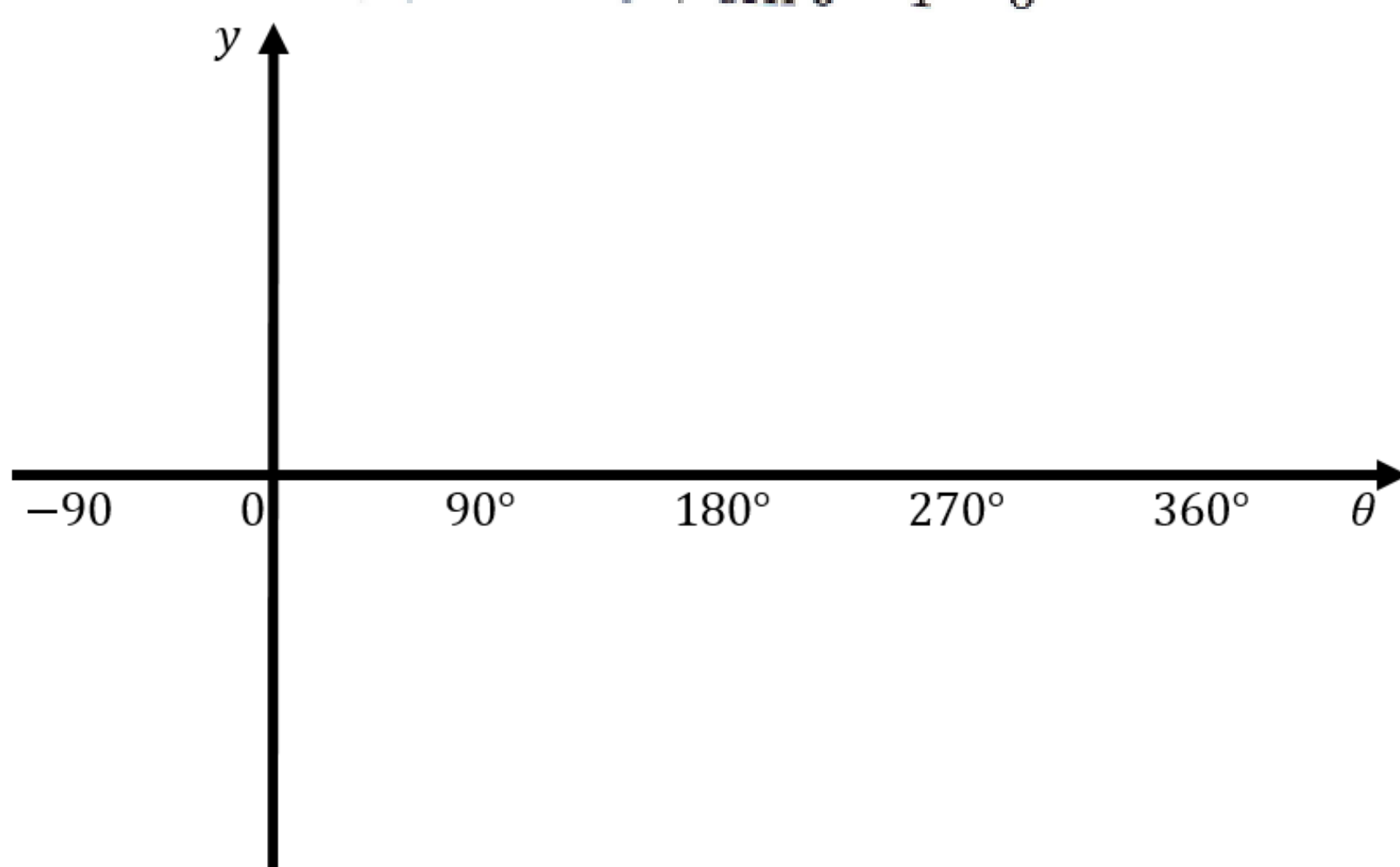


(iii) $\tan^2 \theta = 1$

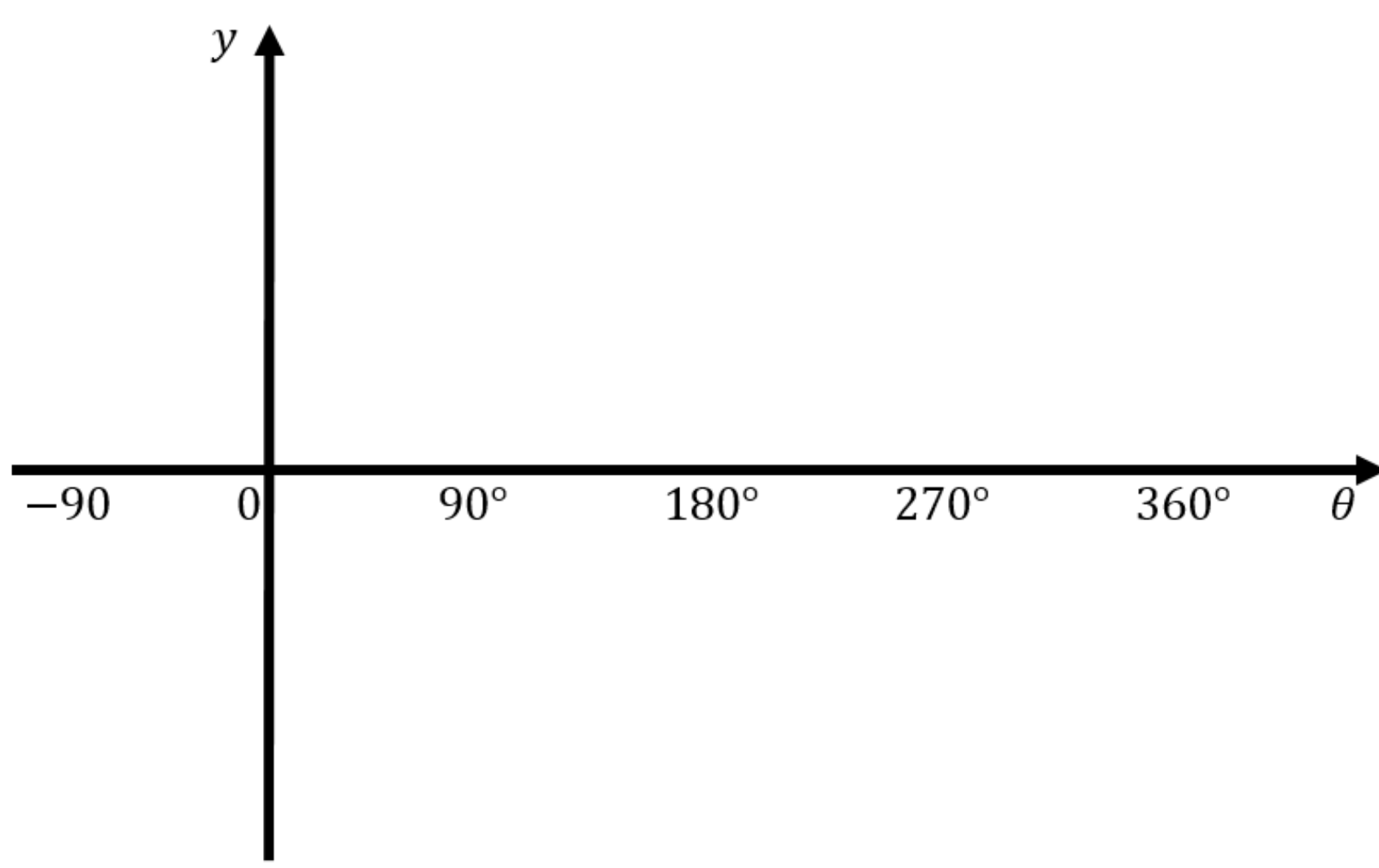


- 4 (i) Factorise $2x^2 + x - 1$.
(ii) Hence solve $2x^2 + x - 1 = 0$.
(iii) Use your results to solve these equations for $0^\circ \leq \theta \leq 360^\circ$.

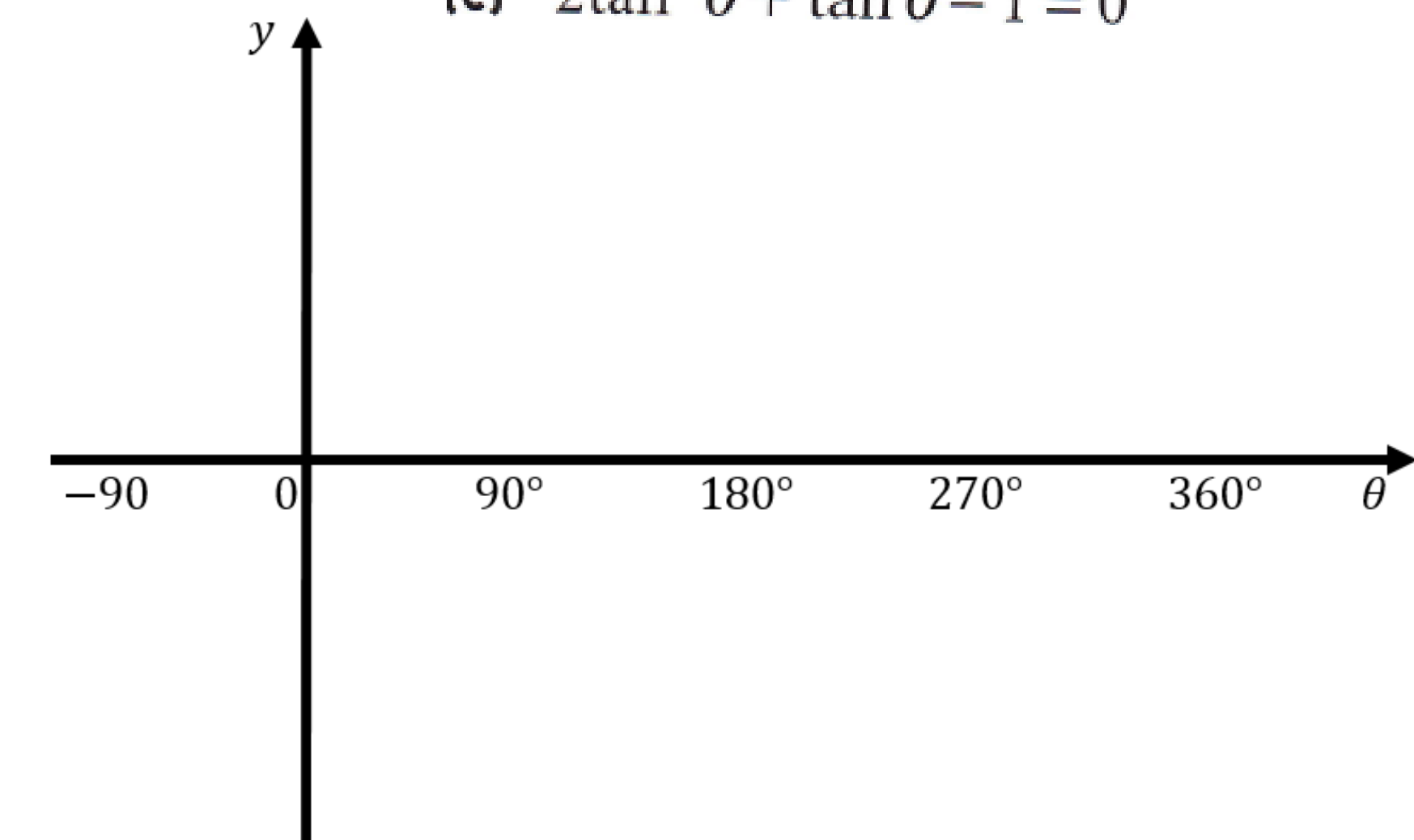
(a) $2\sin^2 \theta + \sin \theta - 1 = 0$



(b) $2\cos^2 \theta + \cos \theta - 1 = 0$

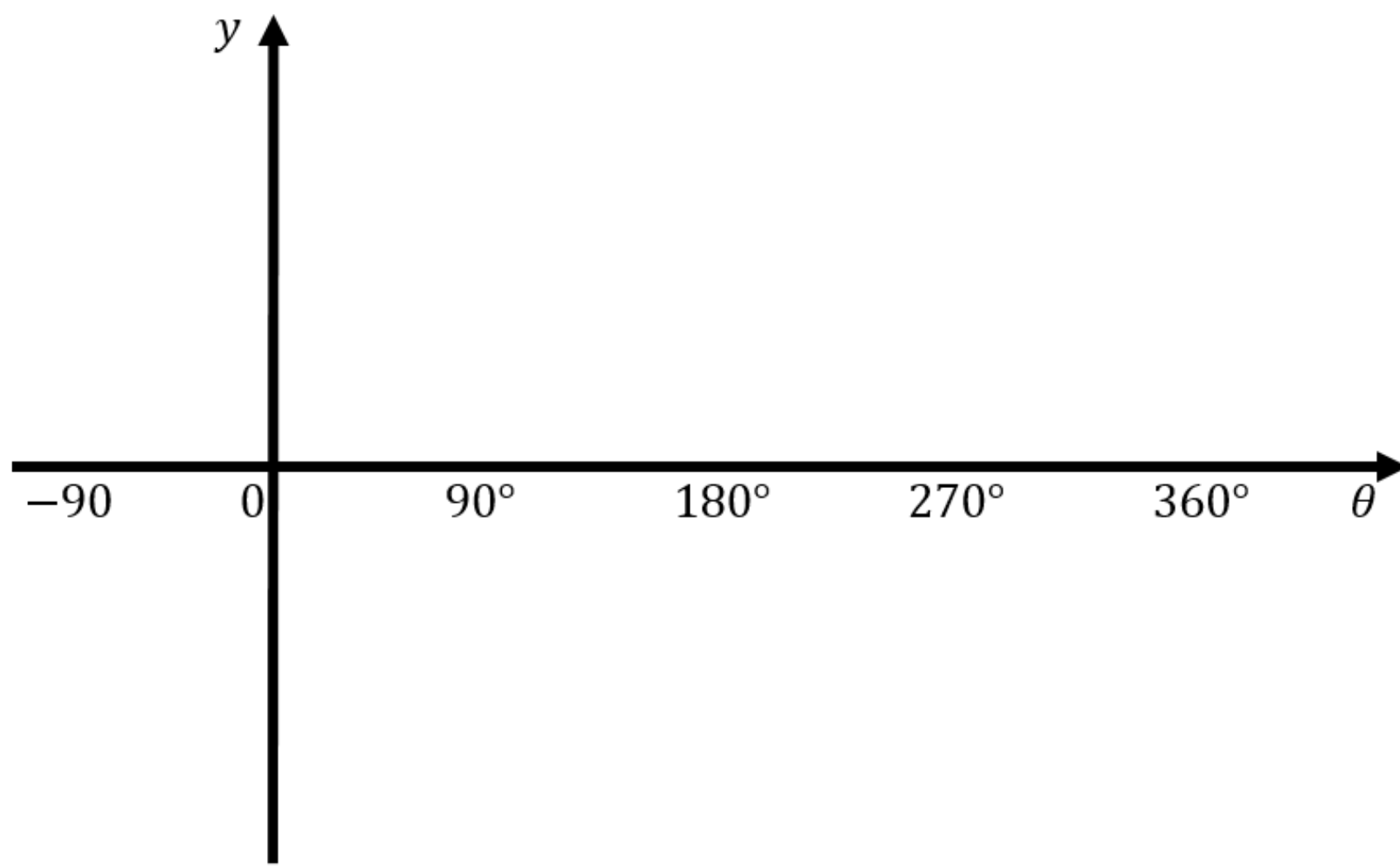


(c) $2\tan^2 \theta + \tan \theta - 1 = 0$

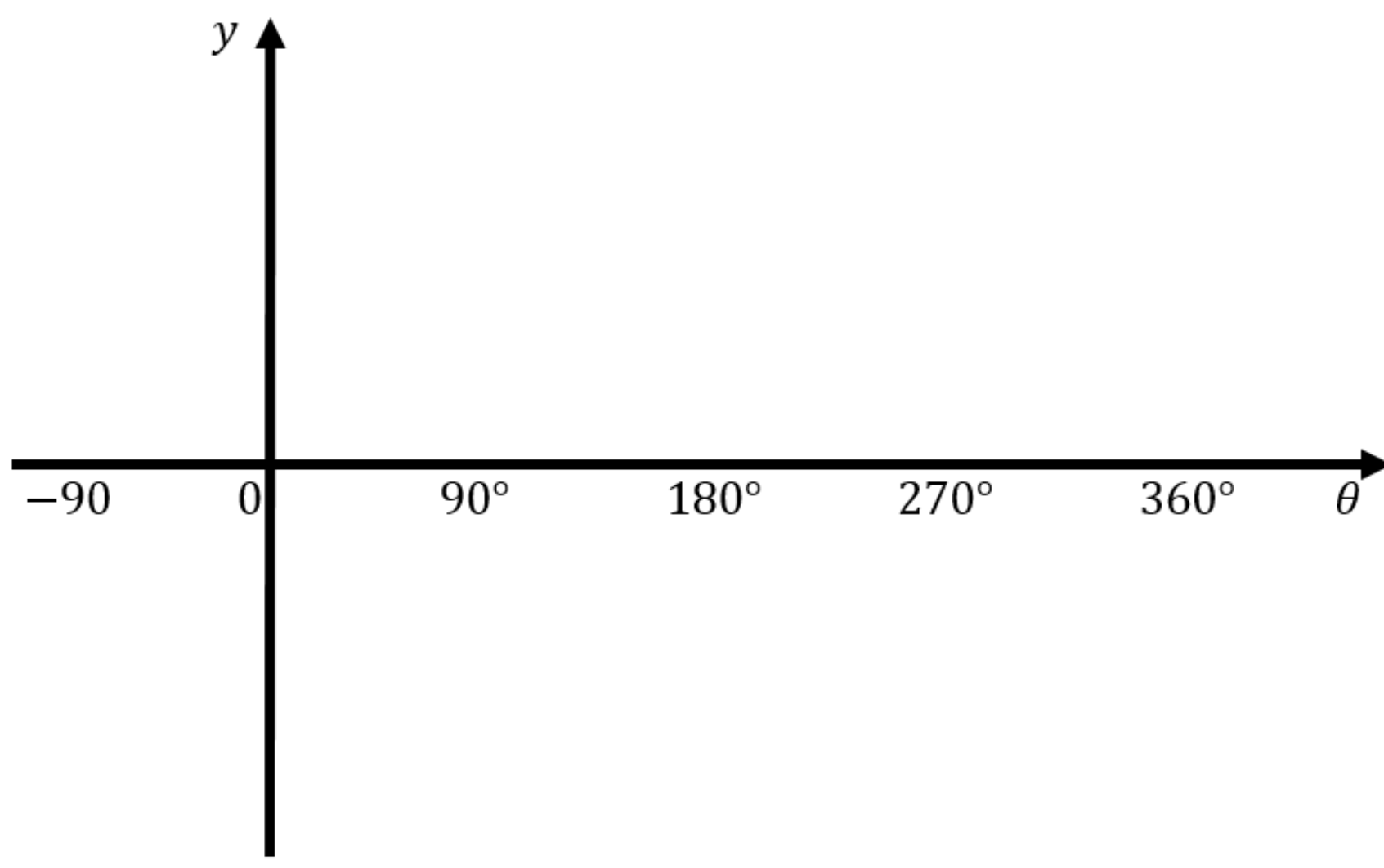


5 Solve the following equations for $0 \leq x \leq 360^\circ$.

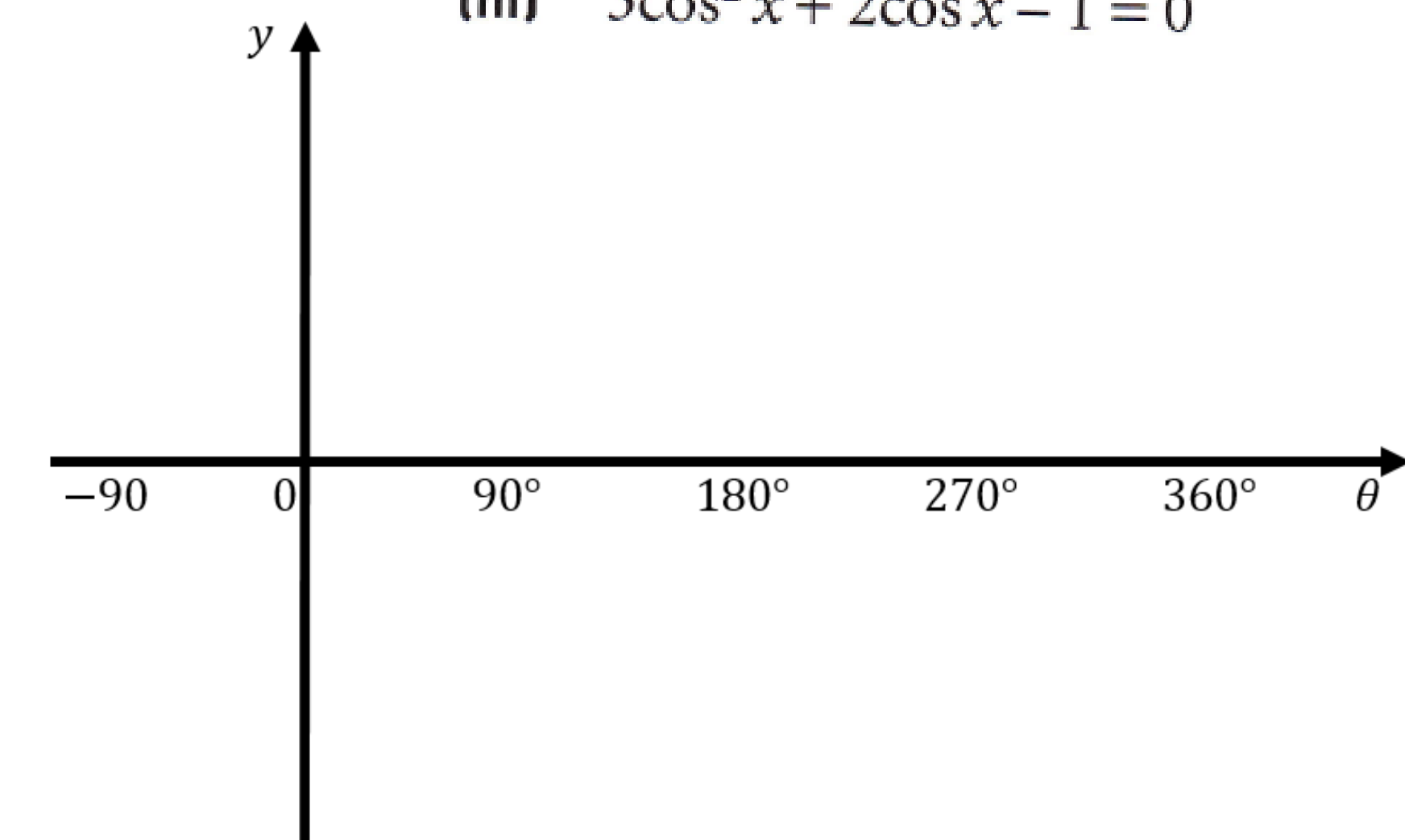
(i) $\tan^2 x - 3 \tan x = 0$



(ii) $1 - 2\sin^2 x = 0$

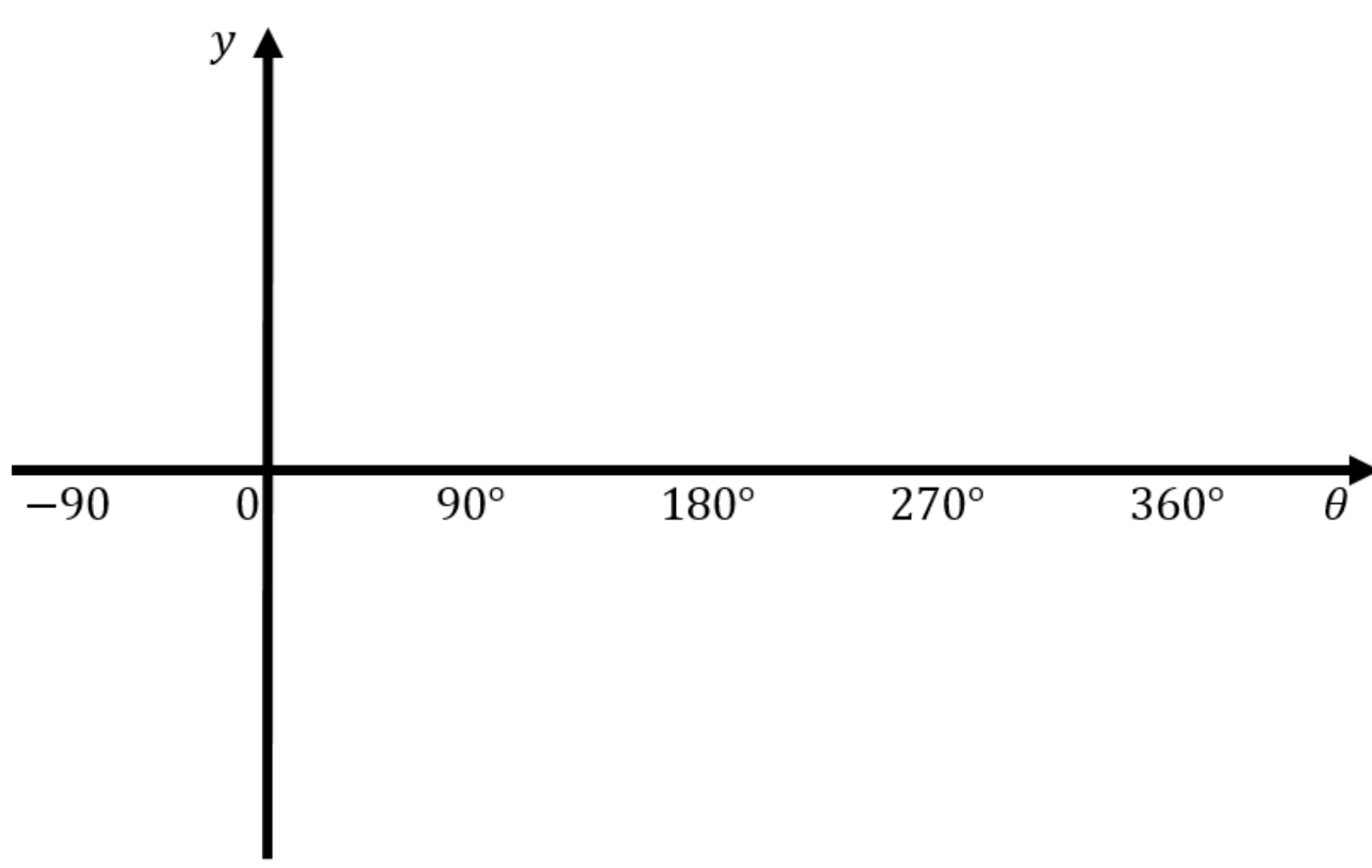


(iii) $3\cos^2 x + 2\cos x - 1 = 0$



5 Solve the following equations for $0 \leq x \leq 360^\circ$.

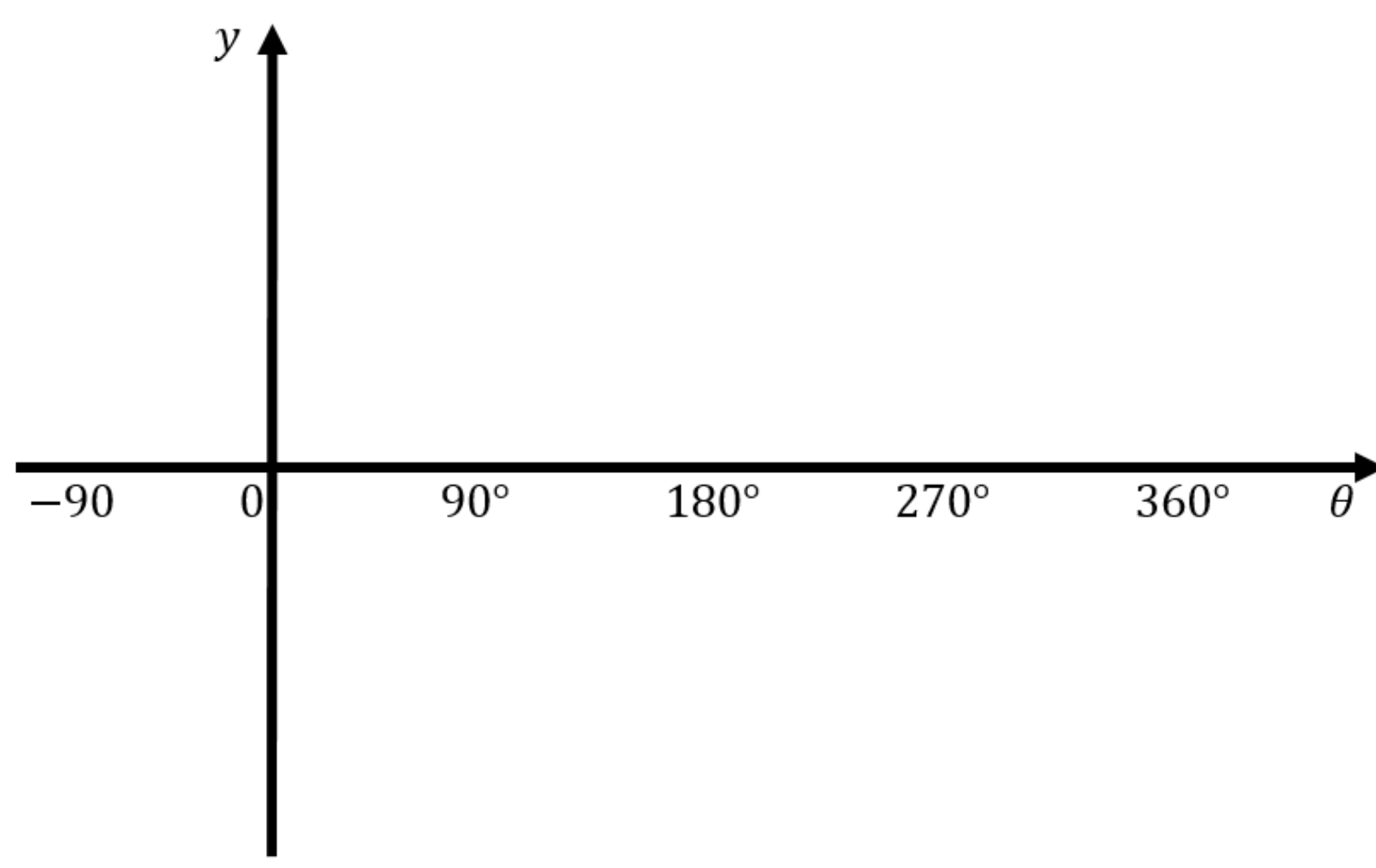
(iv) $2\sin^2 x = \sin x + 1$



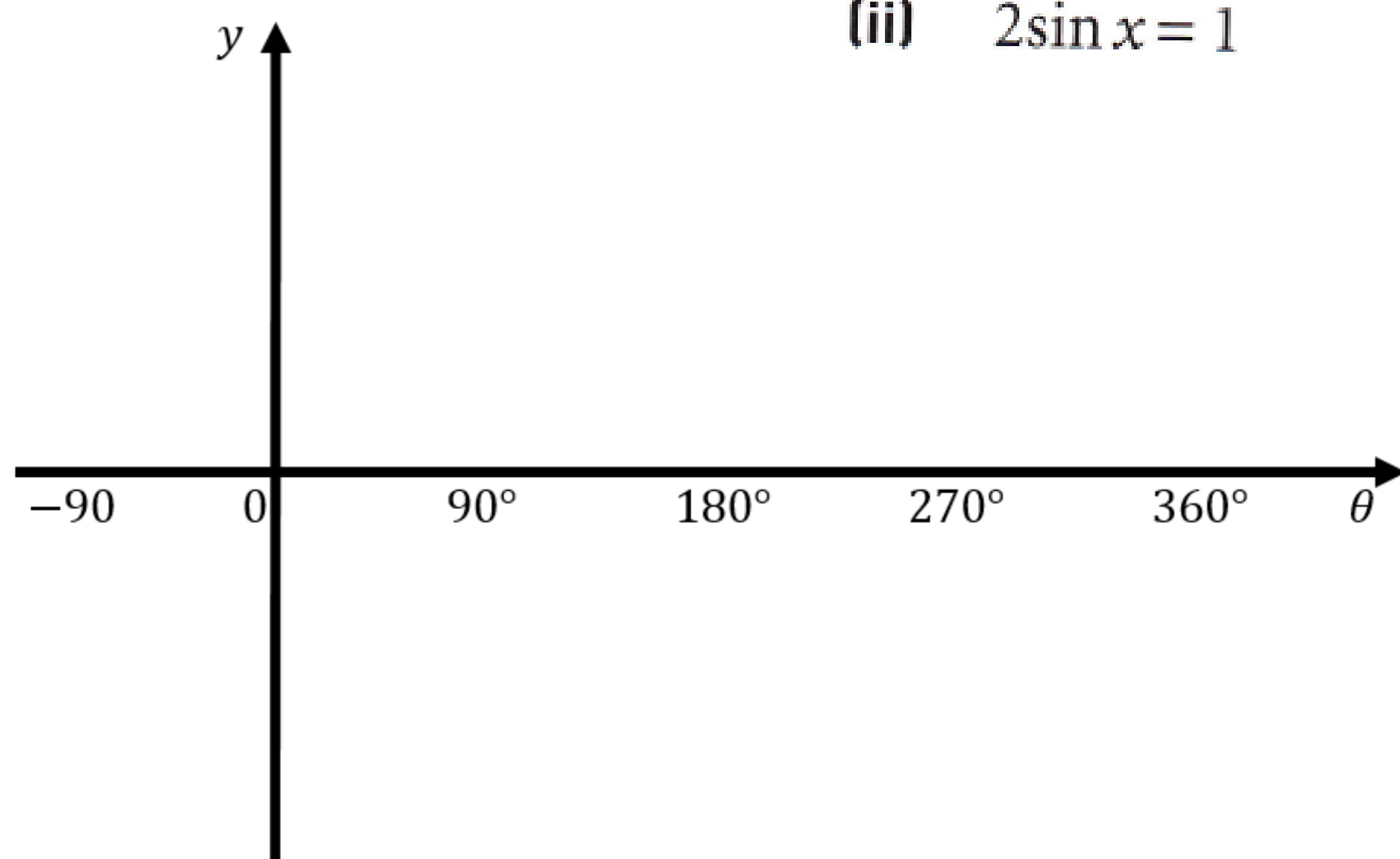
6 Use of a calculator is not allowed in this question.

Solve the following equations for $0 \leq x \leq 360^\circ$.

(i) $\tan x = \sqrt{3}$

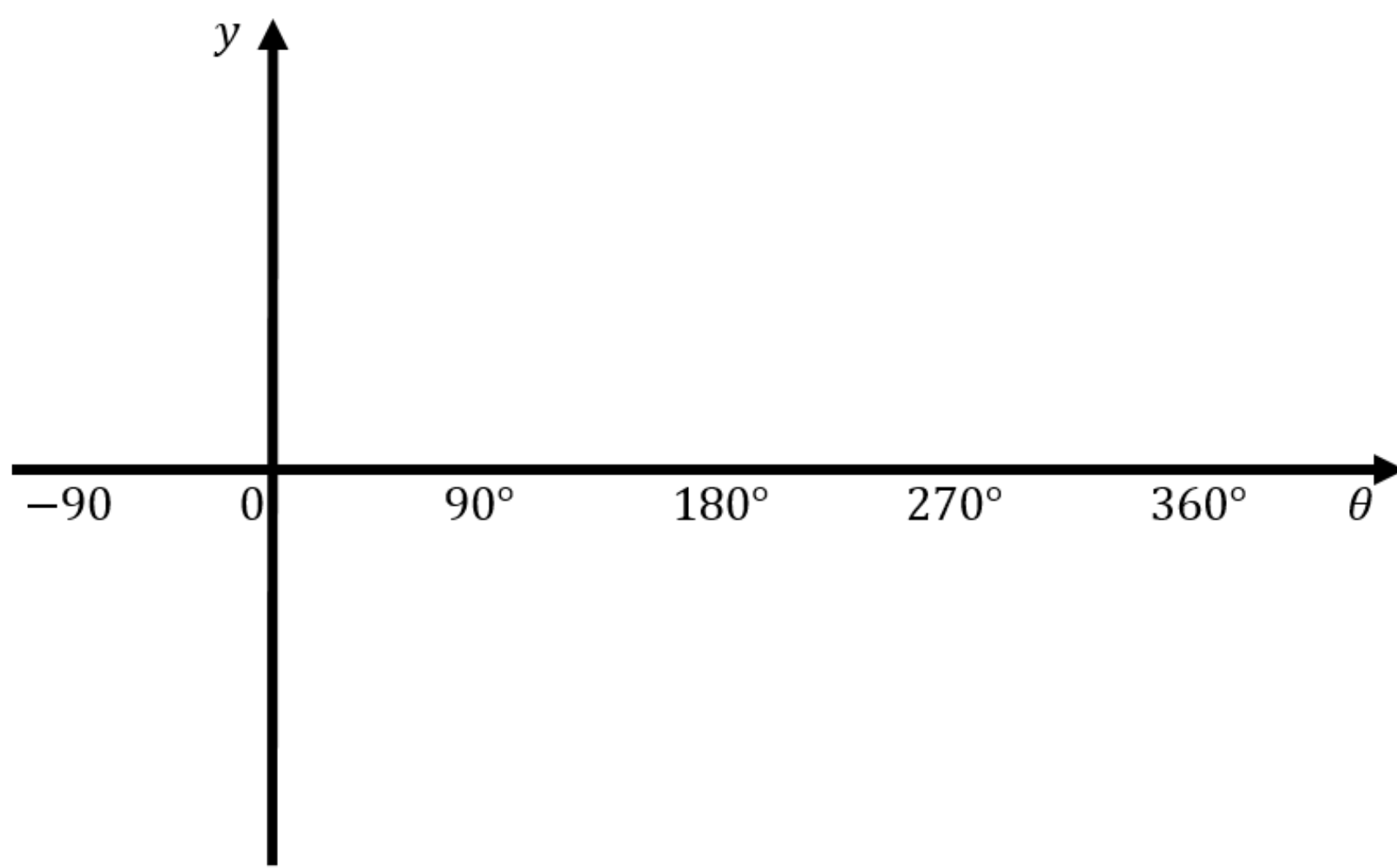


(ii) $2\sin x = 1$

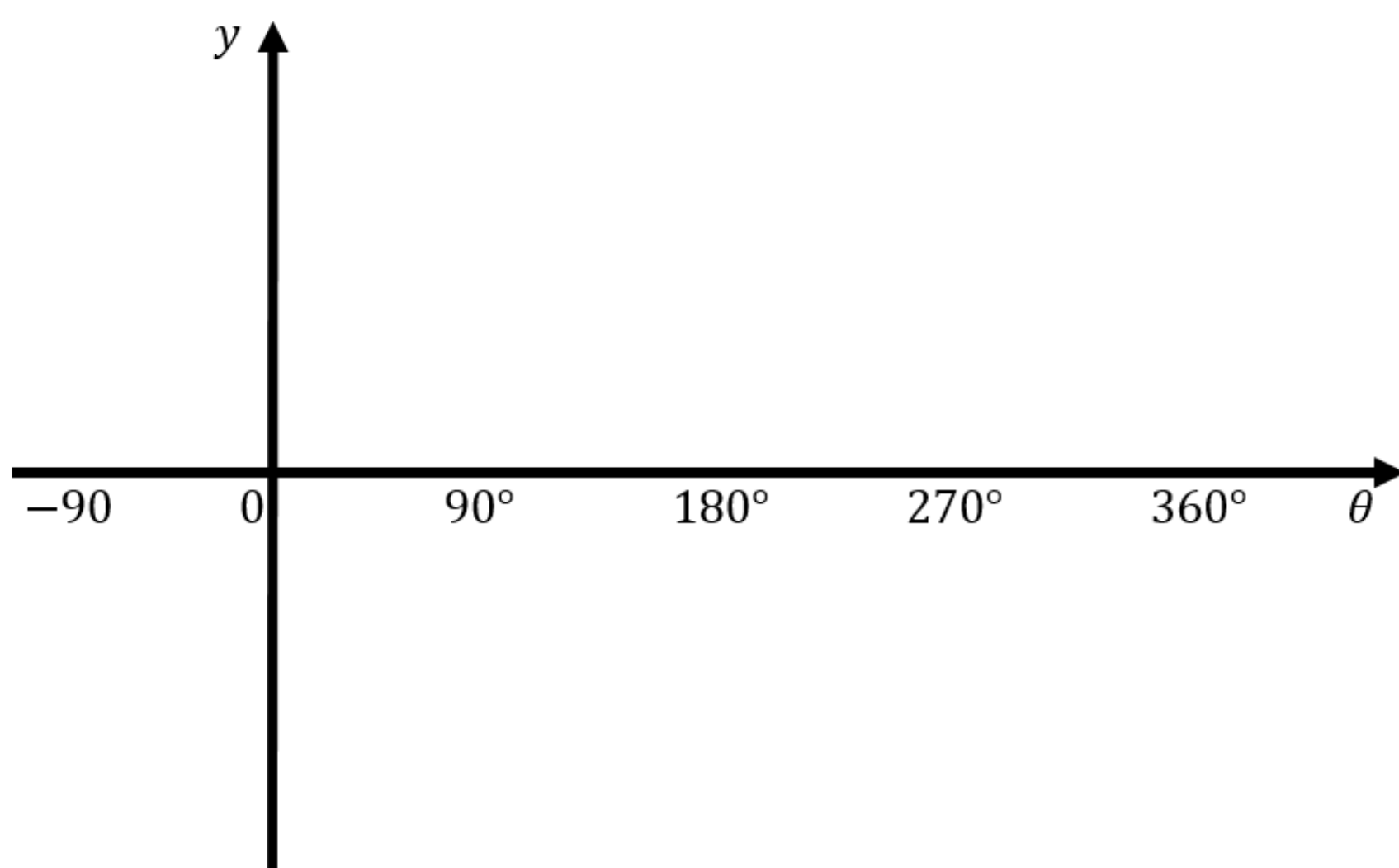


6 Use of a calculator is not allowed in this question.

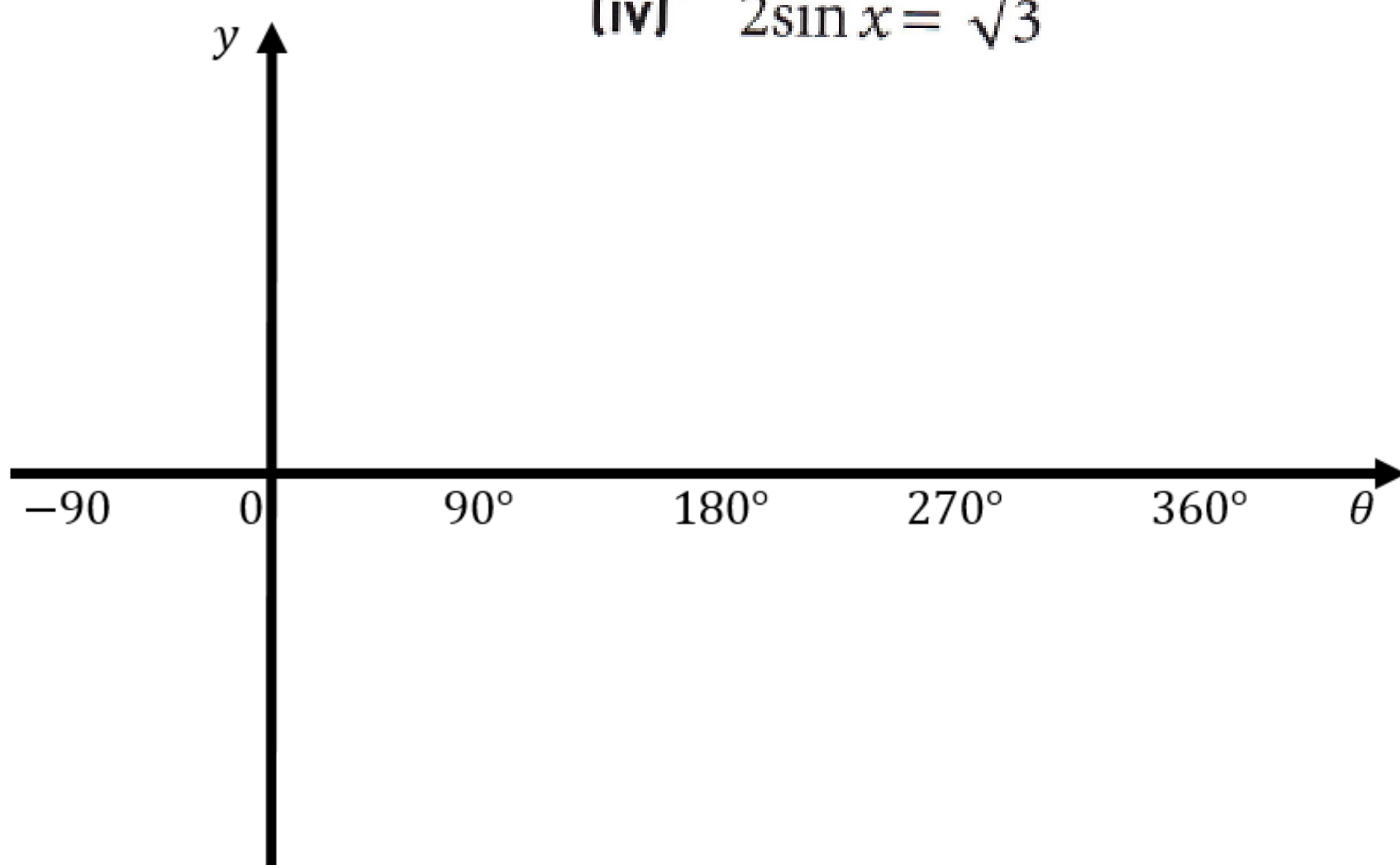
Solve the following equations for $0 \leq x \leq 360^\circ$.



(iii) $\sqrt{2} \cos x - 1 = 0$



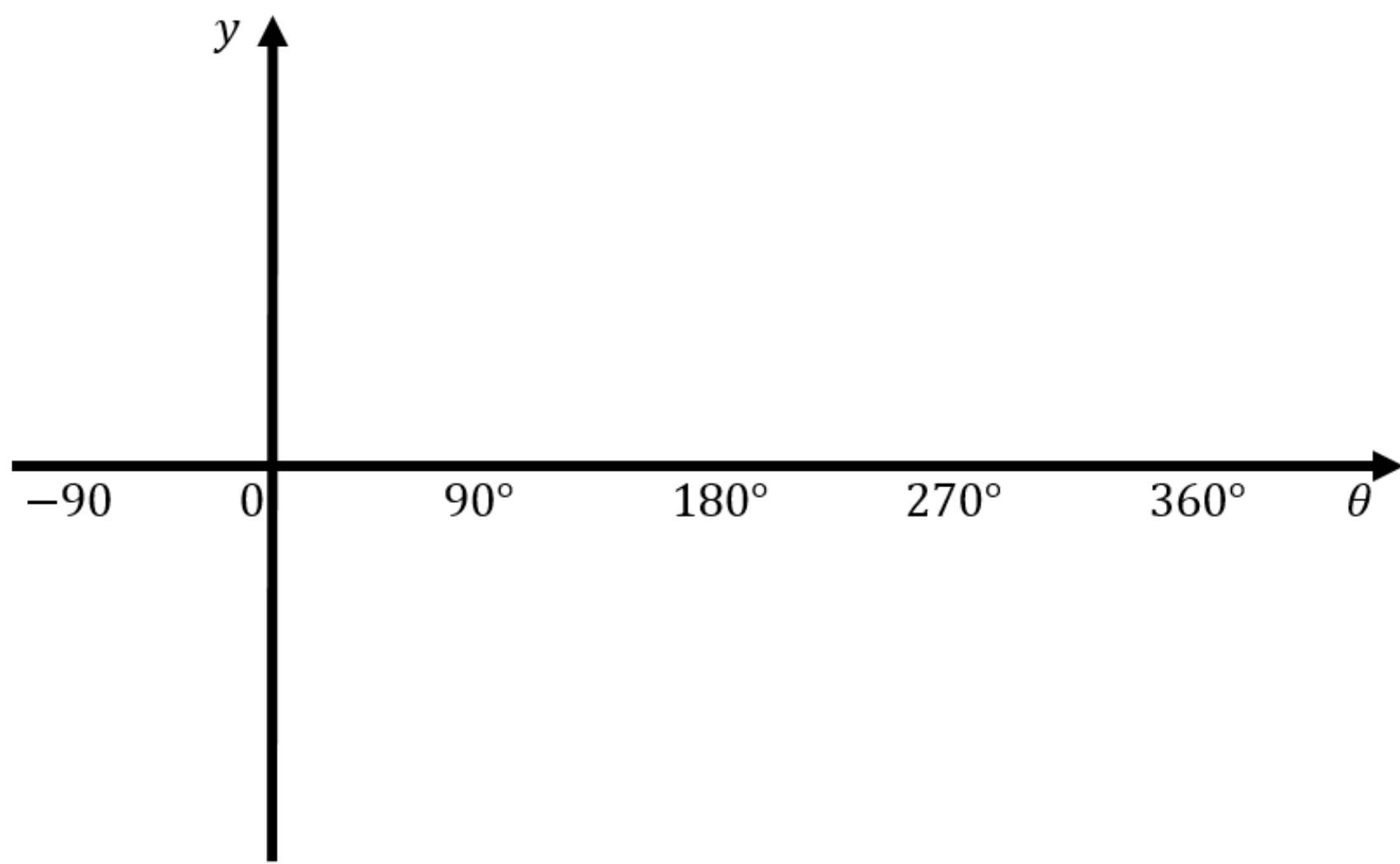
(iv) $2 \sin x = \sqrt{3}$



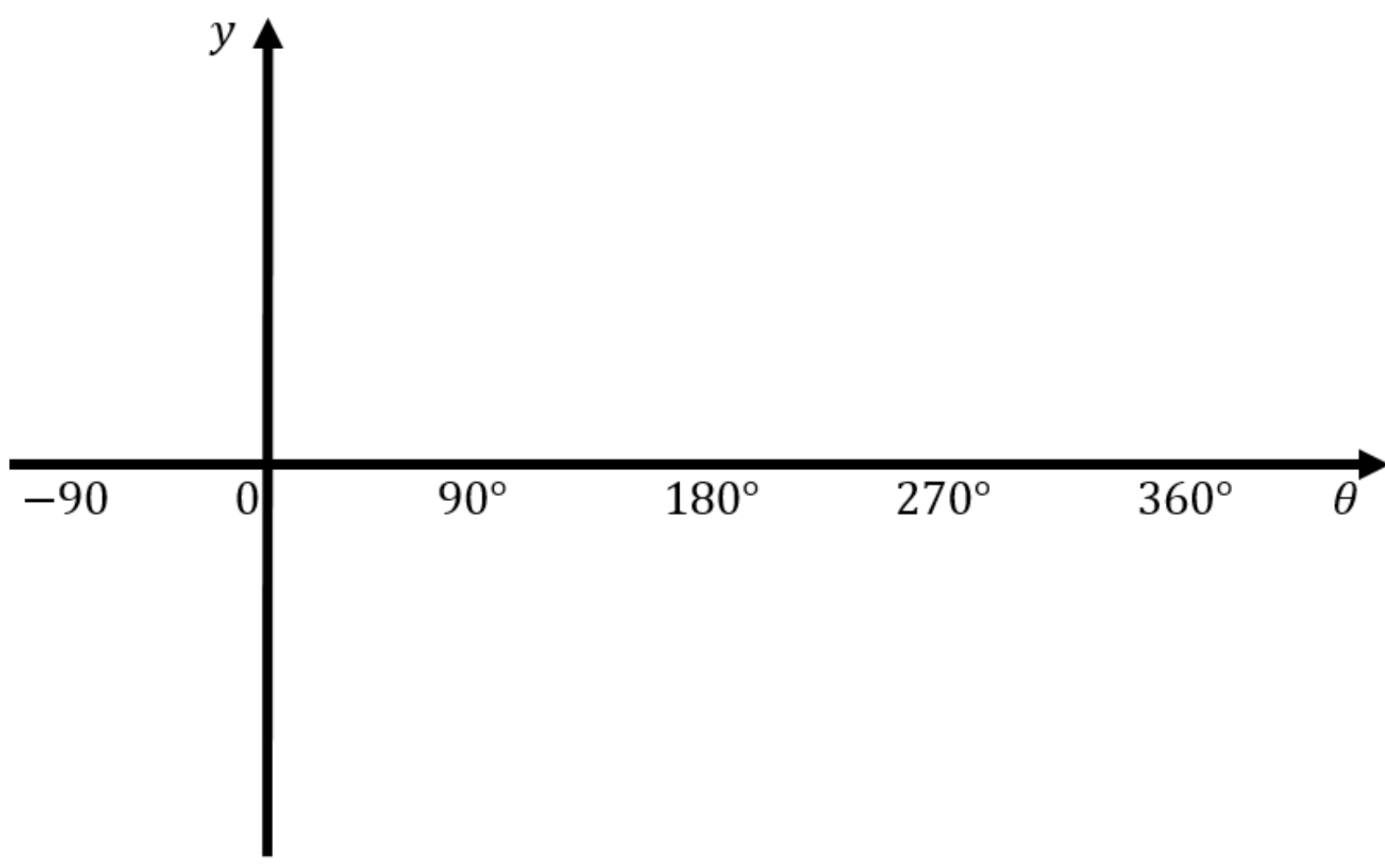
6 Use of a calculator is not allowed in this question.

Solve the following equations for $0 \leq x \leq 360^\circ$.

(v) $\tan^2 x - \tan x = 0$



(iv) $4\cos x = \sqrt{12}$



Exercise 7E (Page 168)

- 1 (i) $60^\circ, 300^\circ$
(ii) $45^\circ, 225^\circ$
(iii) $60^\circ, 120^\circ$
(iv) $210^\circ, 330^\circ$
(v) $90^\circ, 270^\circ$
(vi) $101.3^\circ, 281.3^\circ$
(vii) $0^\circ, 180^\circ$
(viii) $122.7^\circ, 237.3^\circ$
(ix) 90°
- 2 (i) $\theta = 48.2^\circ$ or 311.8°
(ii) $\theta = 45.6^\circ$ or 134.4°
(iii) $\theta = 69.4^\circ$ or 249.4°
(iv) $\theta = 236.4^\circ$ or 303.6°
(v) $\theta = 113.6^\circ$ or 246.4°
(vi) $\theta = 150.9^\circ$ or 330.9°
- 3 (i) $\theta = 60^\circ, 120^\circ, 240^\circ$ or 300°
(ii) $\theta = 45^\circ, 135^\circ, 225^\circ$ or 315°
(iii) $\theta = 45^\circ, 135^\circ, 225^\circ$ or 315°
- 4 (i) $(2x-1)(x+1)$
(ii) $x = 0.5$ or -1
(iii) (a) $\theta = 30^\circ, 150^\circ$ or 270°
(b) $\theta = 60^\circ, 180^\circ$ or 300°
- (c) $\theta = 26.6^\circ, 135^\circ,$
 206.6° or 315°
- 5 (i) $0^\circ 180^\circ 360^\circ 71.6^\circ 251.6^\circ$
(ii) $45^\circ 135^\circ 225^\circ 315^\circ$
(iii) $70.5^\circ 289.5^\circ 180^\circ$
(iv) $90^\circ 210^\circ 330^\circ$
- 6 (i) $60^\circ 240^\circ$
(ii) $30^\circ 150^\circ$
(iii) $45^\circ 315^\circ$
(iv) $60^\circ 120^\circ$
(v) $0^\circ 180^\circ 360^\circ 45^\circ 225^\circ$
(vi) $30^\circ 330^\circ$