

Practice Test - Graphing Trig Functions & Solving

Find the amplitude, the period in degrees, the phase shift in degrees, and the vertical shift.

A, B, C, D

1) $y = 7\cos \theta + 5$

2) $y = \sin \frac{\theta}{8}$

3) $y = 4 + \frac{1}{5} \cdot \cos 8\theta$

4) $y = \frac{1}{7} \cdot \sin (5(\theta + 6))$

5) $y = \frac{1}{7} \cdot \sin (\theta + 90) + 3$

6) $y = 5 + \cos (\theta - 30)$

7) $y = 8\cos (\theta - 45)$

8) $y = 3\sin (2\theta + 120) + 1$

Graph each function using degrees.

9) $y = 4\sin \theta$

10) $y = \cos \theta + 1$

11) $y = 3\cos \theta - 1$

12) $y = \sin 3\theta$

13) $y = \cos 4\theta$

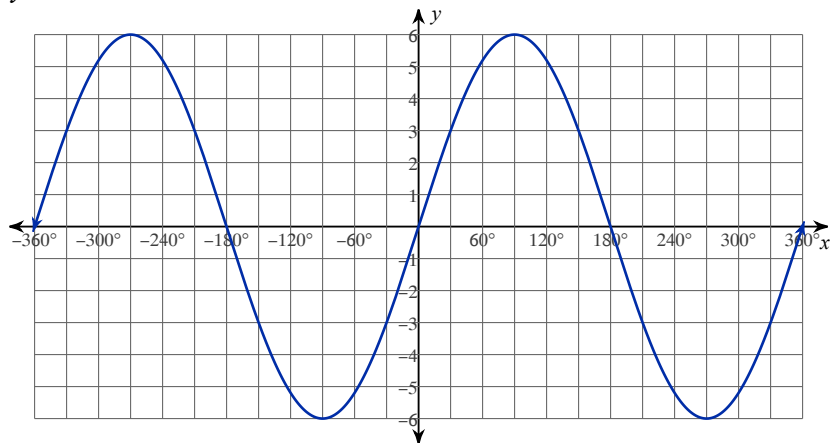
14) $y = \frac{1}{2} \cdot \sin 2\theta$

15) $y = 2\cos \frac{\theta}{4} + 1$

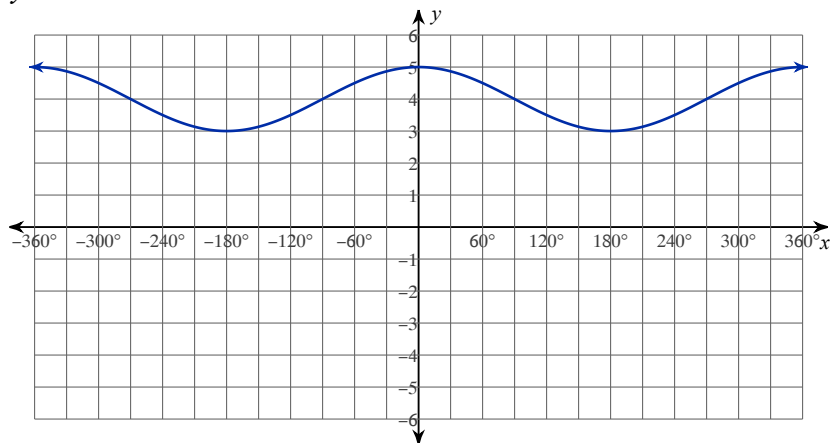
16) $y = \frac{1}{2} \cdot \sin (\theta + 45) + 1$

Write the equation of the indicated function's graph shown in degrees.
First - identify the amplitude, the period, the phase shift, and the vertical shift.

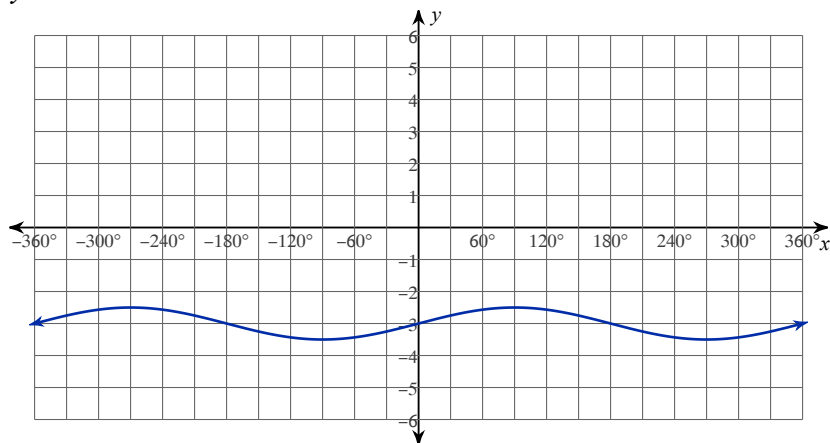
17) $y = \sin \theta$



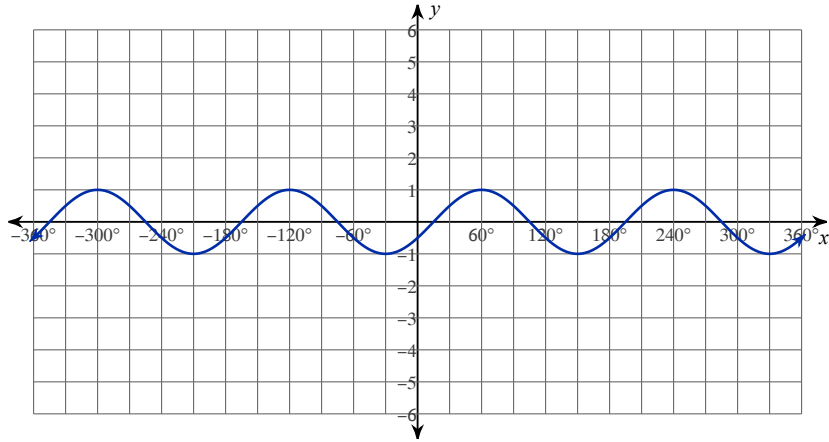
18) $y = \cos \theta$



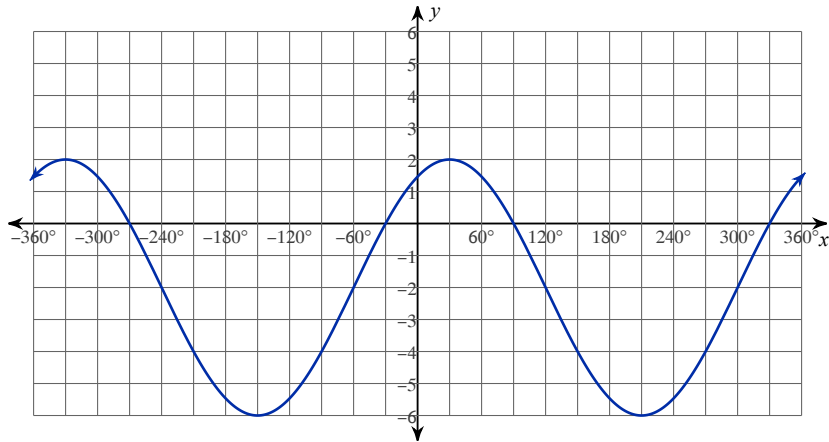
19) $y = \sin \theta$



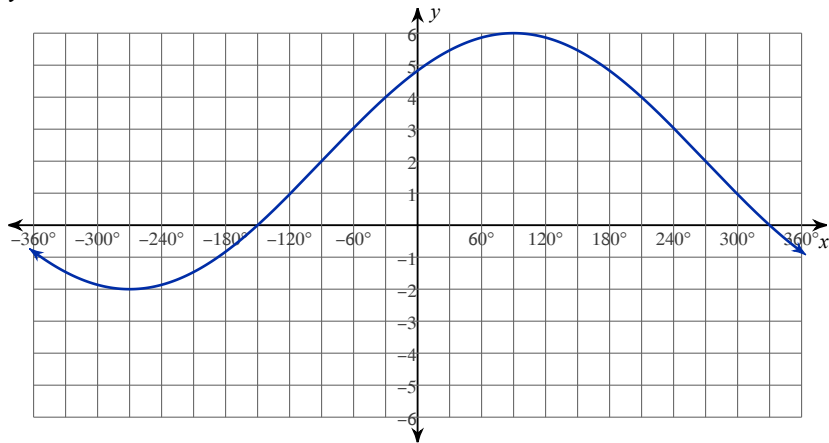
20) $y = \cos \theta$



21) $y = \sin \theta$

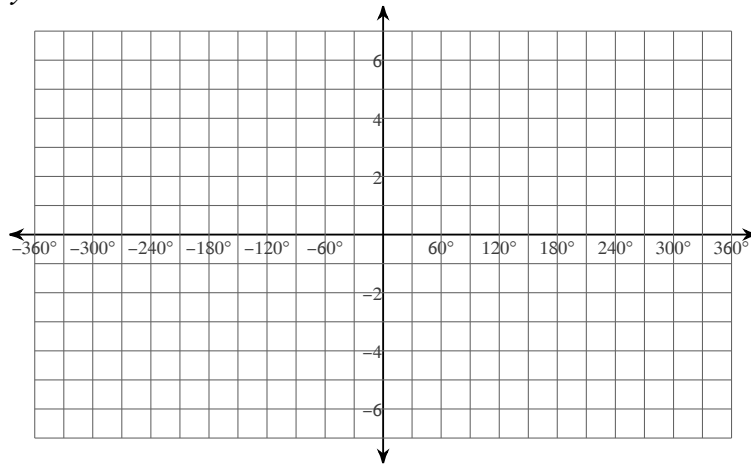


22) $y = \cos \theta$

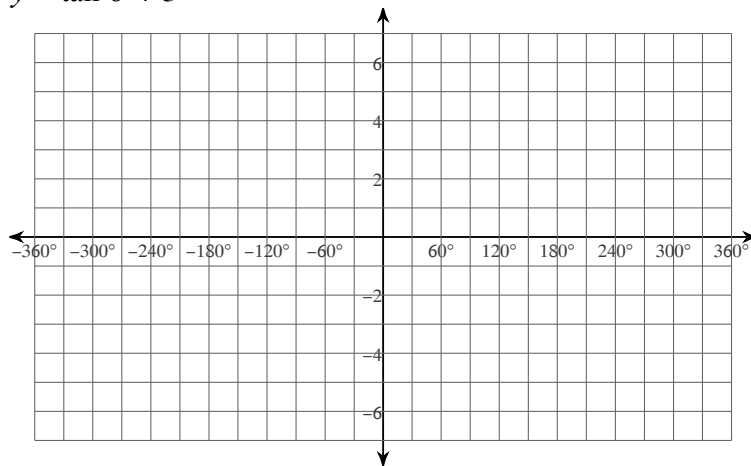


Find the amplitude, the period in degrees, the phase shift in degrees, and the vertical shift. Then sketch the graph using degrees.

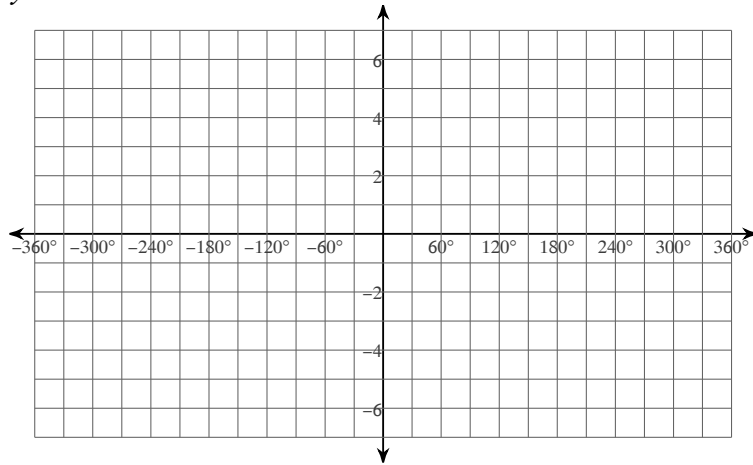
23) $y = \tan \theta$



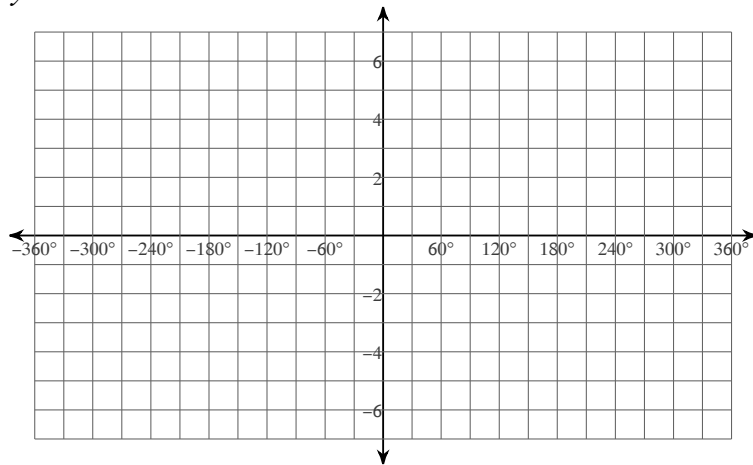
24) $y = \tan \theta + 3$



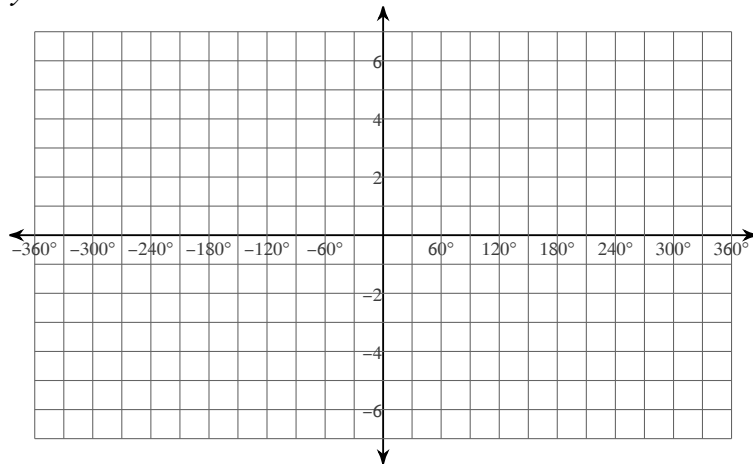
25) $y = \cot \theta$



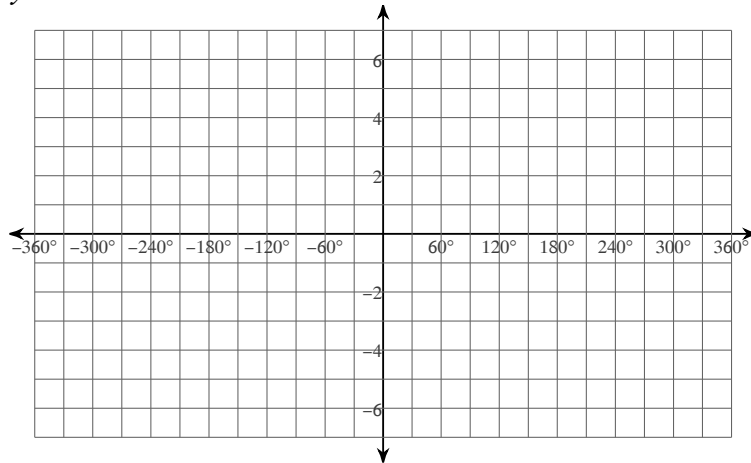
26) $y = \cot \theta - 2$



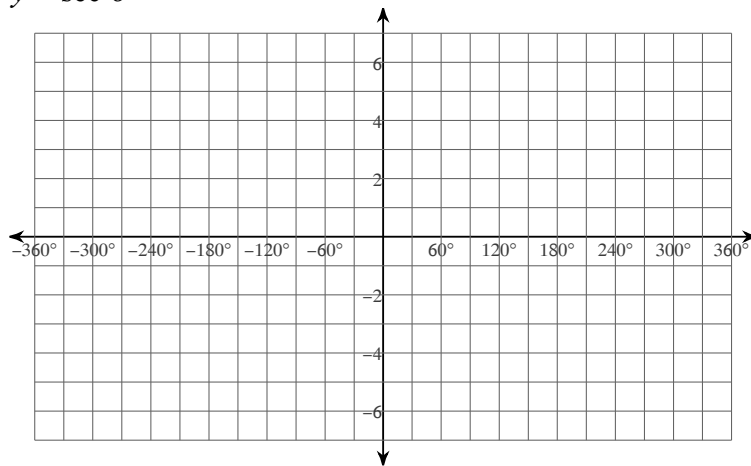
27) $y = \csc \theta$



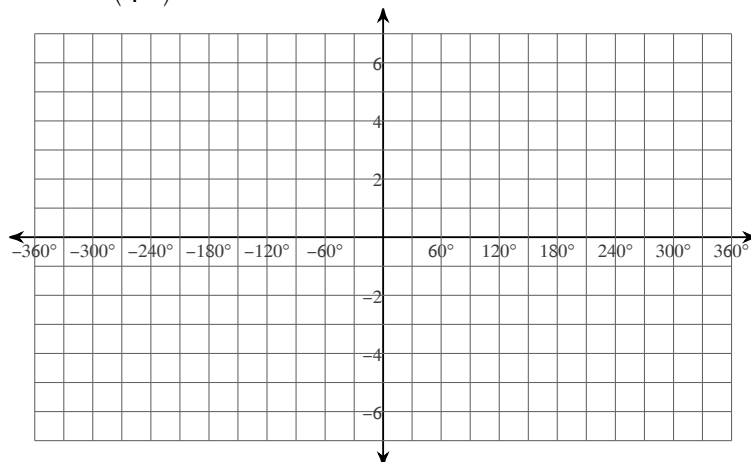
28) $y = \csc 2\theta + 1$



29) $y = \sec \theta$



30) $y = \sec\left(\frac{3}{4}\theta\right) - 3$



31) Find 2 solutions for the equation:

$$\sin(5x) \cos(3x) - \cos(5x) \sin(3x) = \frac{1}{2}$$

Answers to Practice Test - Graphing Trig Functions & Solving

1) Amplitude: 7
 Period: 360°
 Phase shift: None
 Vert. shift: Up 5

2) Amplitude: 1
 Period: 2880°
 Phase shift: None
 Vert. shift: None

3) Amplitude: $\frac{1}{5}$
 Period: 45°
 Phase shift: None
 Vert. shift: Up 4

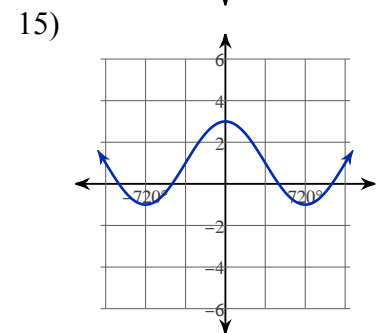
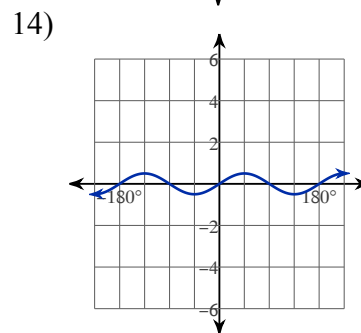
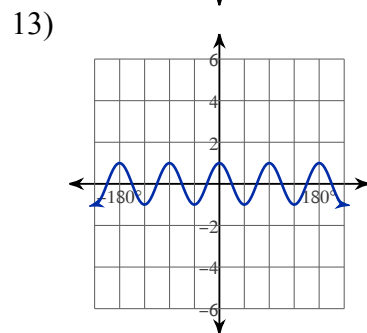
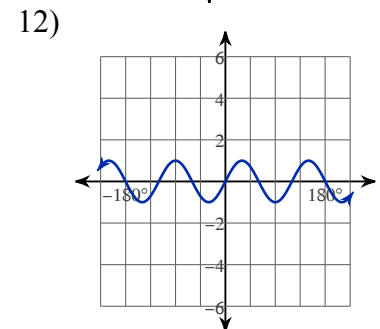
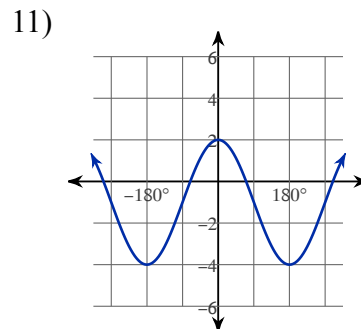
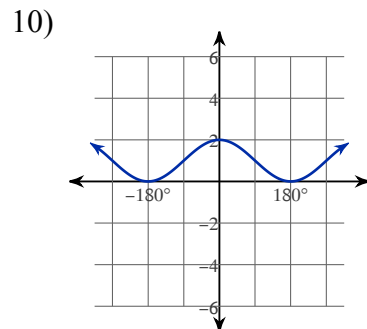
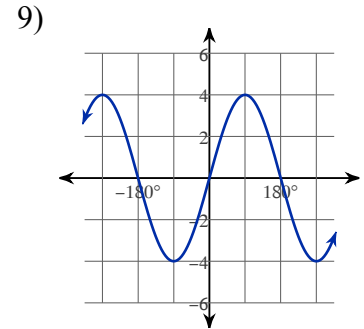
4) Amplitude: $\frac{1}{7}$
 Period: 72°
 Phase shift: Left 6°
 Vert. shift: None

5) Amplitude: $\frac{1}{7}$
 Period: 360°
 Phase shift: Left 90°
 Vert. shift: Up 3

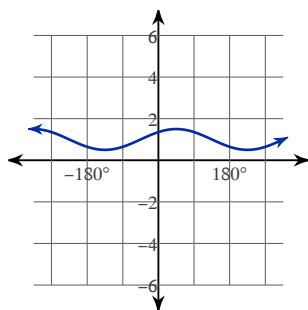
6) Amplitude: 1
 Period: 360°
 Phase shift: Right 30°
 Vert. shift: Up 5

7) Amplitude: 8
 Period: 360°
 Phase shift: Right 45°
 Vert. shift: None

8) Amplitude: 3
 Period: 180°
 Phase shift: Left 60°
 Vert. shift: Up 1



16)



19) $y = \frac{1}{2} \cdot \sin \theta - 3$

Amplitude: $\frac{1}{2}$ Period: 360°

Phase shift: None

Vert. shift: Down 3

22) $y = 4\cos\left(\frac{1}{2}\theta - 45\right) + 2$ or

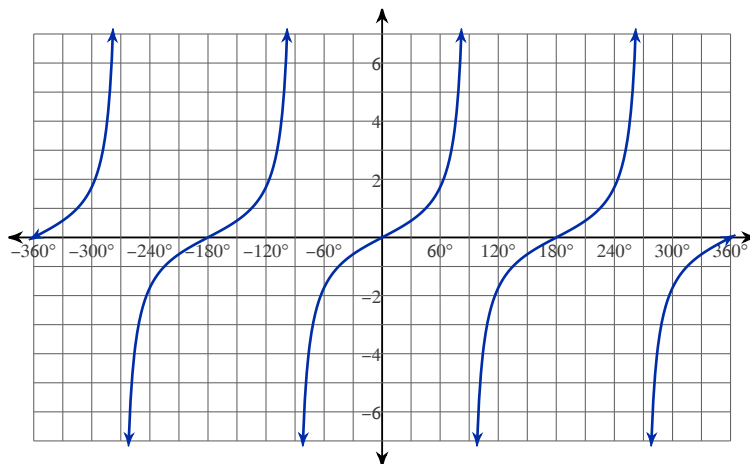
$y = 4\cos\left(\frac{1}{2}(\theta - 90)\right) + 2$

Amplitude: 4

Period: 720° Phase shift: Right 90°

Vert. shift: Up 2

23)



17) $y = 6\sin \theta$

Amplitude: 6

Period: 360°

Phase shift: None

Vert. shift: None

20) $y = \cos(2(\theta - 60))$ or
 $y = \cos(2\theta - 120)$

Amplitude: 1

Period: 180° Phase shift: Right 60°

Vert. shift: None

18) $y = 4 + \cos \theta$

Amplitude: 1

Period: 360°

Phase shift: None

Vert. shift: Up 4

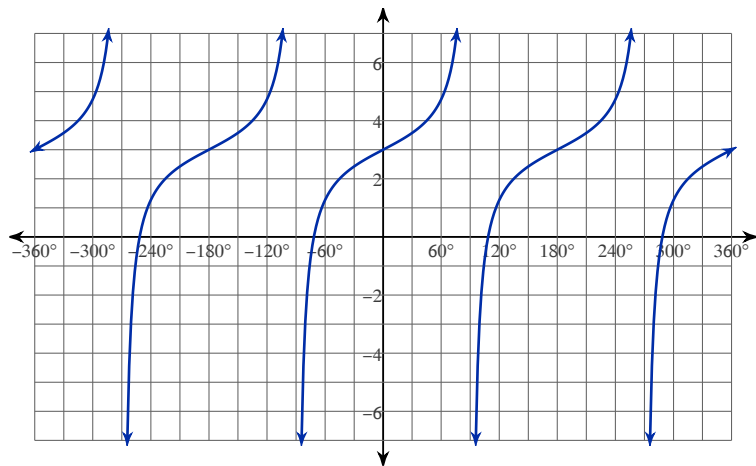
21) $y = 4\sin(\theta + 60) - 2$

Amplitude: 4

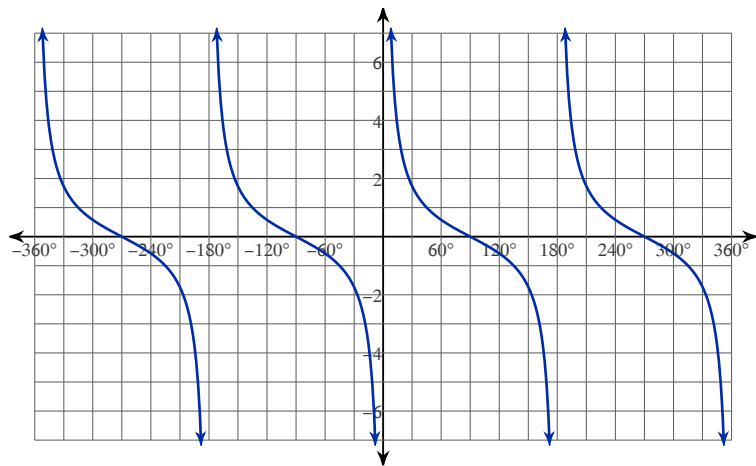
Period: 360° Phase shift: Left 60°

Vert. shift: Down 2

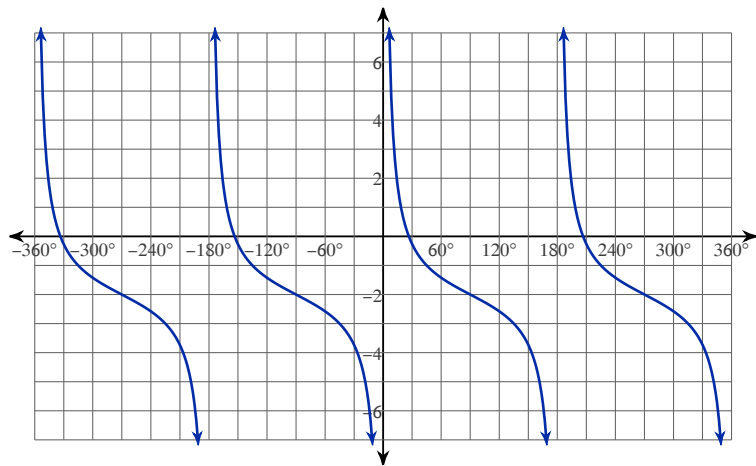
24)



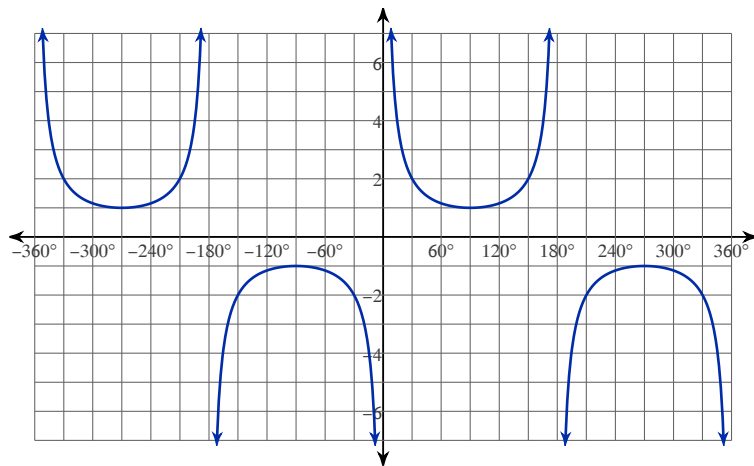
25)



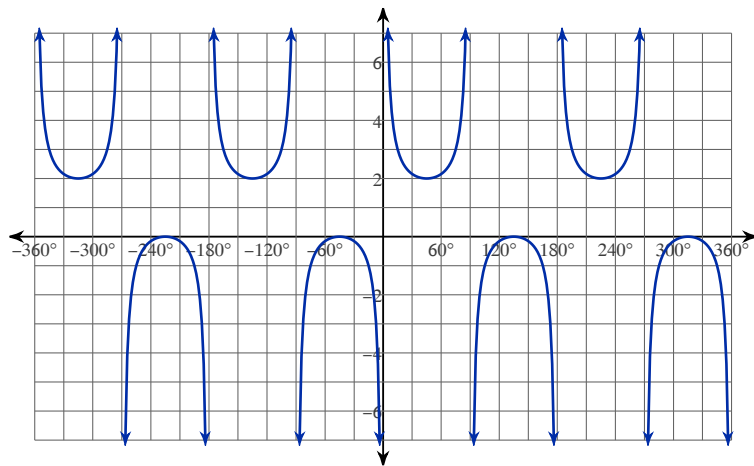
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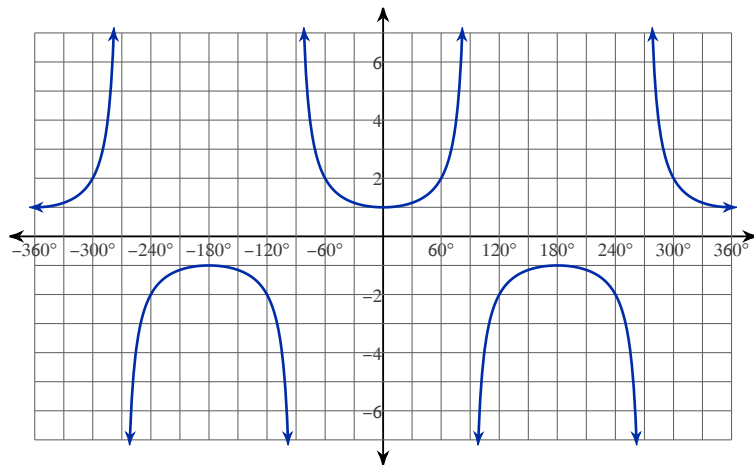
27)



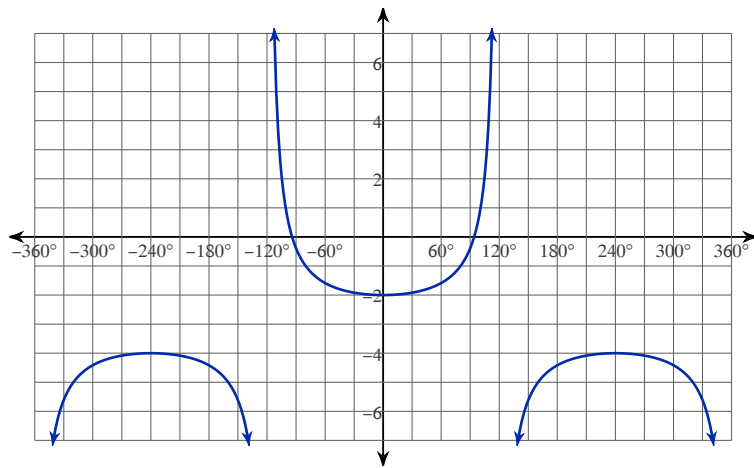
28)



29)



30)



31) examples: $x = 0.26, 1.31, 3.41, 4.45\dots$