

Analysis
Graphing Trigonometric Functions Practice

Name _____
 Hour _____

1. Which trigonometric functions have a range of $[-1, 1]$?
2. Which trigonometric functions have a domain of all real numbers?
3. The graph of which trigonometric function contains the point $(\pi, 0)$?

Complete the following charts:

4. $y = 4 \tan(x - \pi)$	5. $y = \frac{1}{2} \cos x - 5$	6. $y = -\sin x + 2$
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Period: _____	_____	_____
Amplitude: _____	_____	_____
Phase Shift: _____	_____	_____
Vertical Shift: _____	_____	_____
Reflection: _____	_____	_____

7. $y = 3 \sin\left(x + \frac{\pi}{2}\right)$	8. $y = -2 \cos x$	9. $y = \tan\left(x - \frac{\pi}{4}\right)$
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Period: _____	_____	_____
Amplitude: _____	_____	_____
Phase Shift: _____	_____	_____
Vertical Shift: _____	_____	_____
Reflection: _____	_____	_____

Write the equation for the graph with the following characteristics:

10. Sine graph, vertical shift up 4

11. Tangent graph, reflected across the x-axis, phase shift of $\frac{\pi}{2}$ to the left

12. Cosine graph, amplitude of 5, shifted right by π

13. Sine graph, amplitude of $\frac{1}{2}$, vertical shift down 2

14. Tangent graph, reflected across the x-axis, shifted right π , and up 1

Analysis

Graphing Trig Functions Review

Name _____

Hour _____

List the domain and range of each of the trig functions listed.

1. $y = \sin x$

Domain: _____

Range: _____

2. $y = \cos x$

Domain: _____

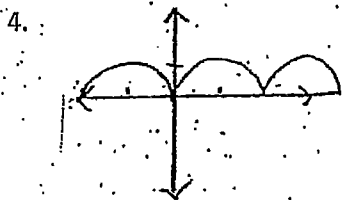
Range: _____

3. $y = \tan x$

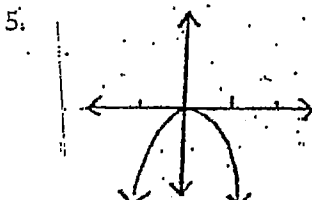
Domain: _____

Range: _____

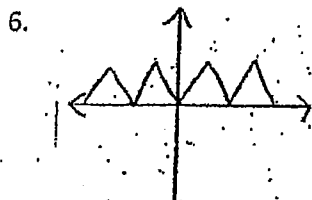
Are the following graphs periodic?



Yes No



Yes No



Yes No

Complete the following:

7. $y = \sin\left(x - \frac{\pi}{2}\right) + 1$

Amplitude: _____

Period: _____

Range: _____

Phase Shift: _____

Vertical Shift: _____

Reflection? _____

8. $y = 3 \cos(x + \pi) - 2$

9. $y = -4 \tan x - 5$

Write the equation of the graph with the following characteristics:

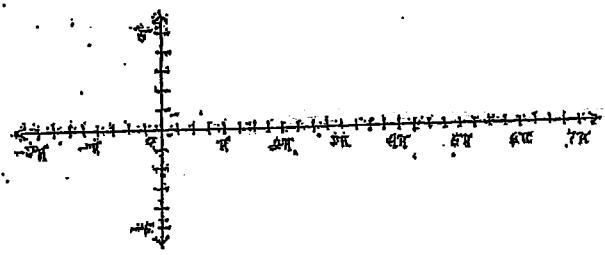
10. Tangent graph; amplitude of 4, phase shift $\frac{\pi}{4}$ to the left.

11. Cosine graph; reflected across the x-axis, phase shift π to the right, vertical shift down 2.

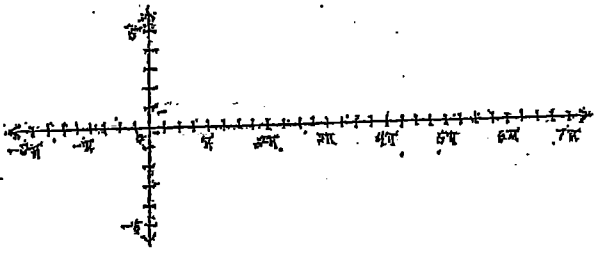
12. Sine graph; phase shift $\frac{\pi}{2}$ to the left, vertical shift up 1, amplitude of 2, reflected across the x-axis.

Graph each equation and state its period.

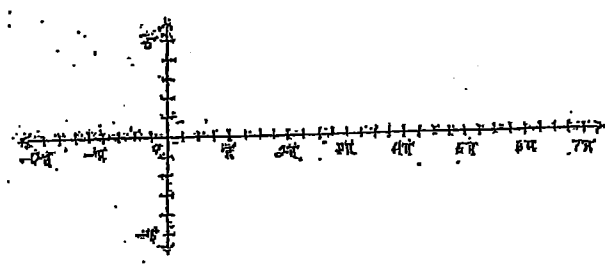
13. $y = 3 \sin x$ Period _____



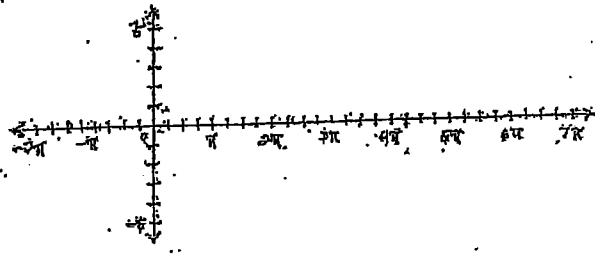
14. $y = -2 \cos x$ Period _____



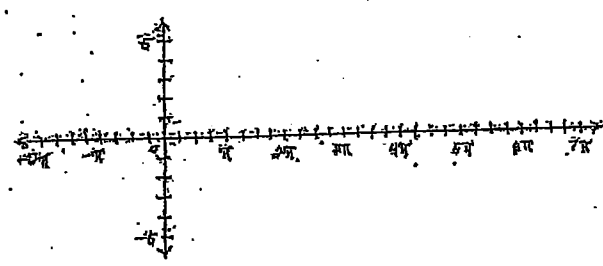
15. $y = -\sin x - 2$ Period _____



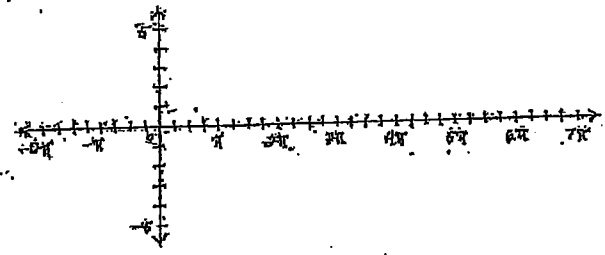
16. $y = \frac{1}{2} \tan x$ Period _____



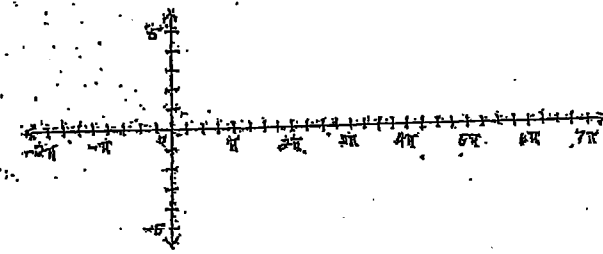
17. $y = \cos(x - \pi)$ Period _____



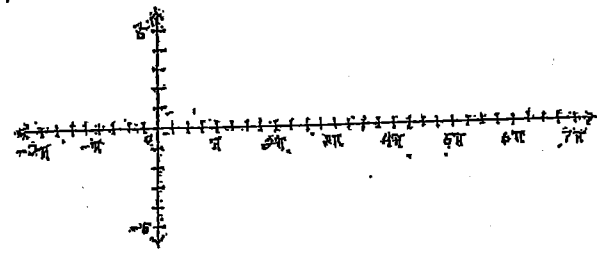
18. $y = 3 \tan\left(x + \frac{\pi}{4}\right)$ Period _____



19. $y = \frac{1}{2} \sin\left(x + \frac{\pi}{2}\right)$

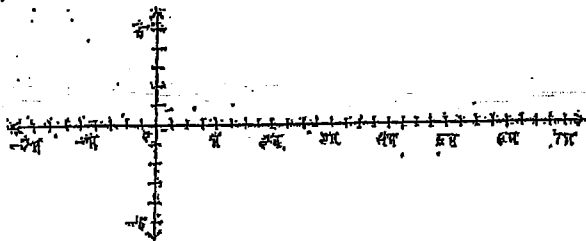


20. $y = -2 \tan x + 1$

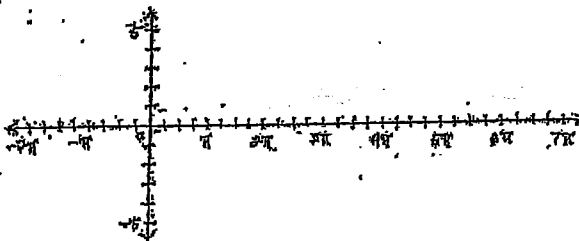


Graph one period of each function. State the period and amplitude of each.

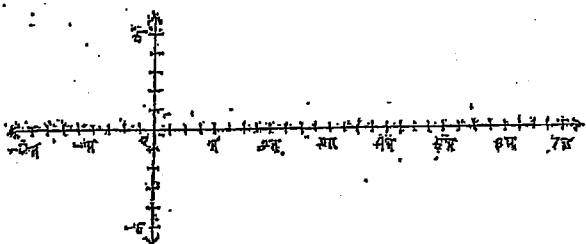
15. $y = \tan\left(x + \frac{\pi}{2}\right)$



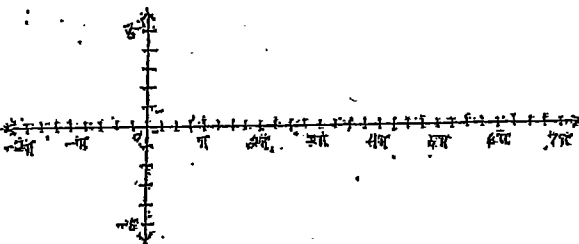
16. $y = 3 \sin x$



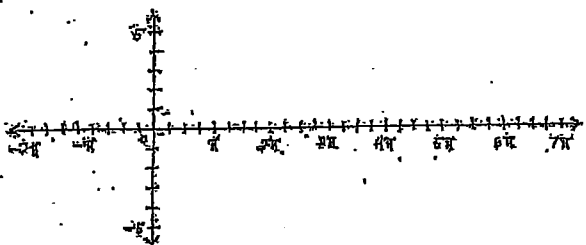
17. $y = \cos x - 2$



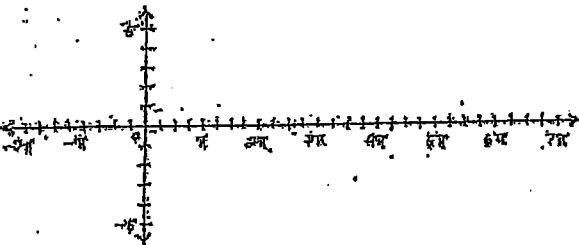
18. $y = \frac{1}{2} \tan x$



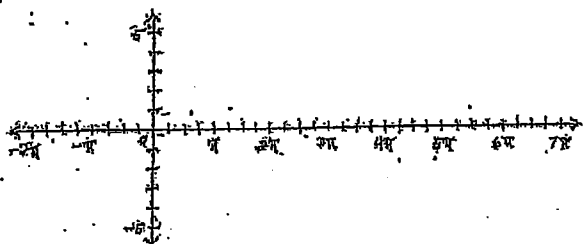
19. $y = \cos(x - \pi)$



20. $y = \sin x + 1$



21. $y = -2 \sin x - 1$



22. $y = 3 \cos(x + \pi)$

