

Name: _____

Date: _____

Tangent Quiz

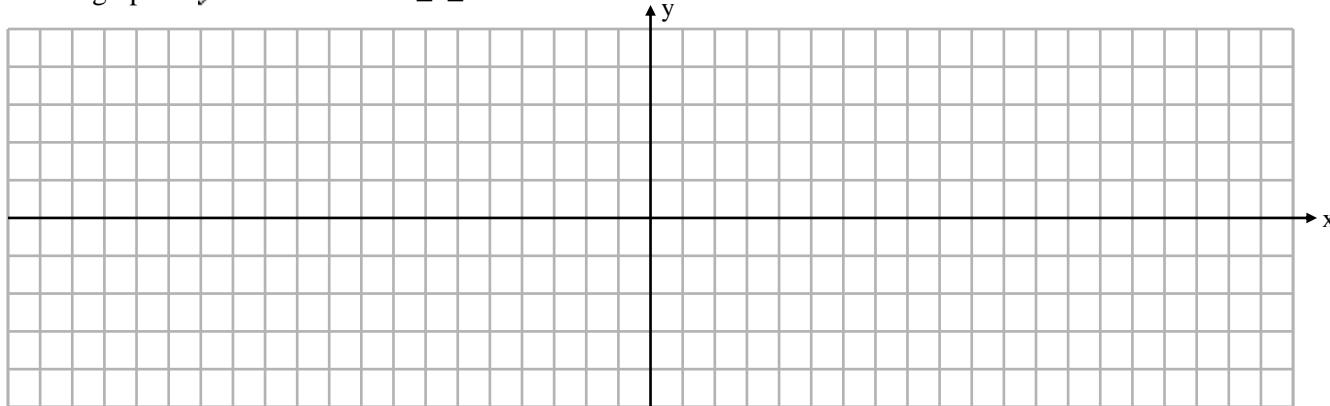
Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ____ 1. Which of the following is not an asymptote of the function $f(\theta) = \tan \theta$?
- A. $x = -\frac{7}{2}\pi$ C. $x = -\frac{5}{2}\pi$
B. $x = -\frac{9}{2}\pi$ D. $x = -\pi$
- ____ 2. Given the trigonometric function $y = \tan x$, which is the x -coordinate at which the function is undefined?
- A. $\frac{9}{2}\pi$ C. $-\frac{1}{3}\pi$
B. $-\frac{7}{6}\pi$ D. $\frac{3}{4}\pi$
- ____ 3. Given the trigonometric function $y = \tan x$, find the value of the y -coordinate of the point with x -coordinate -1200° .
- A. $\sqrt{3}$ C. 1
B. -1 D. undefined
- ____ 4. Which function has zeros only at $\theta = n\pi, n \in \mathbb{I}$?
- A. $y = \tan(\theta - \frac{4}{3}\pi)$ C. $y = \tan(\theta + \frac{1}{4}\pi)$
B. $y = \tan(\theta - \frac{7}{6}\pi)$ D. $y = \tan(\theta + 5\pi)$

Short Answer

1. Sketch the graph of $y = \tan x$ for $-360^\circ \leq x \leq 360^\circ$.

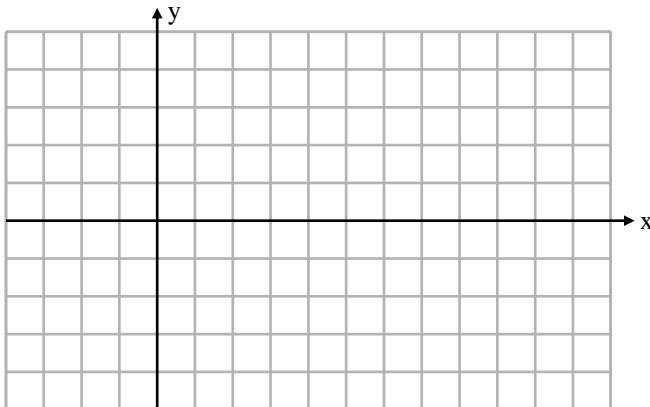


- b) Determine the following characteristics.

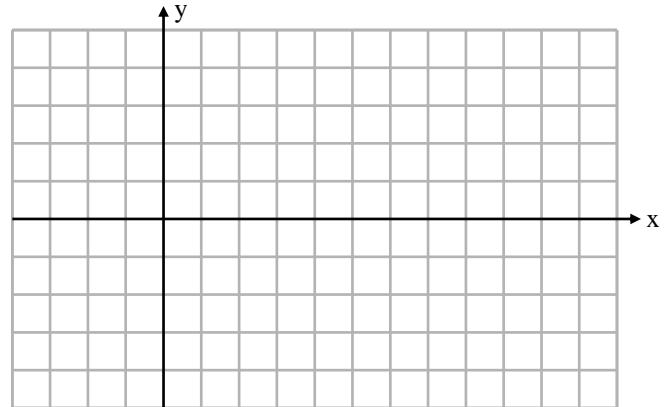
- i) Domain
- ii) Range
- iii) y-intercept
- iv) general equation for the x-intercepts
- v) general equation the asymptotes.

2. Graph at least one period of the following functions, with horizontal and vertical scales and all features shown clearly. Graph in radians.

(a) $y = 3 \tan x$



(b) $y = \tan 2(x + \frac{\pi}{6})$



3. How does $\cos\theta$ relate to the asymptotes of the graph $y = \tan \theta$?

Tangent Quiz

Answer Section

MULTIPLE CHOICE

- | | | |
|----------------------|---|---|
| 1. ANS: D
NAT: T4 | PTS: 1 DIF: Easy
TOP: The Tangent FunctionKEY:
PTS: 1 DIF: Average
TOP: The Tangent FunctionKEY:
PTS: 1 DIF: Average
TOP: The Tangent FunctionKEY:
PTS: 1 DIF: Difficult +
TOP: The Tangent FunctionKEY: | OBJ: Section 5.3
asymptote tangent function
OBJ: Section 5.3
undefined tangent function
OBJ: Section 5.3
coordinate tangent function
OBJ: Section 5.3
zeros transformation |
|----------------------|---|---|