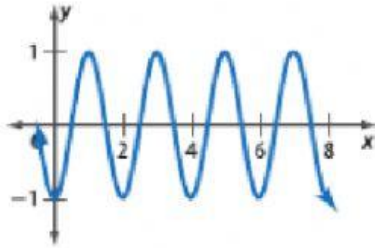
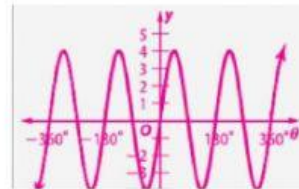
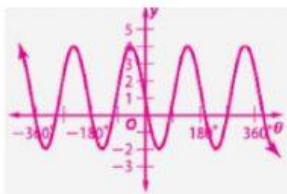


GRADE 10th Revision Worksheet

1. Determine the period of each function

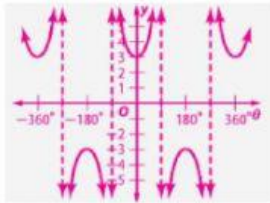


- a. 1
b. 2
c. 3
d. 4
2. A wheel with a diameter of 18 centimeters completes 4 revolutions in 1 minute. What is the period of the function that describes the height of one spot on the outside edge of the wheel as a function of time.
- a. 15
b. 30
c. 45
d. 60
3. Find the correct graph for $y = 4 \sin 2\theta$

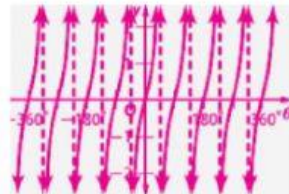


b.

c.

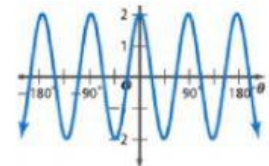


d.



4. What angle has a tangent and sine that are both negative?

- a. 65°
b. 265°
c. 330°
d. 120°
5. Which is the correct equation for the given graph.
- a. $y = \sin 4\theta$
b. $y = \cos 4\theta$
c. $y = 2 \cos 4\theta$
d. $y = 2 \sin 4\theta$



6. Humans can hear sounds with a frequency of 40 Hz. Find the period of the function that models the sound waves.
- 0.05
 - 0.1
 - 0.25
 - 0.025
7. Find the period of $\tan 2\theta$.
- 90 degree
 - 720 degree
 - 180 degree
 - 360 degree
8. State the amplitude for $y = \frac{1}{2} \tan\left(\theta - \frac{\pi}{2}\right)$.
- $\frac{1}{2}$
 - $\frac{\pi}{2}$
 - 1
 - does not exist.
9. State the midline for $y = \sec \theta - 5$
- $y = -5$
 - $y = 5$
 - $y = \sec \theta$
 - $y = \sec \theta - 5$
10. The vertical shift for $y = \tan \theta + 3$ is
- 3 units up
 - 3 units down
 - 3 units left
 - 3 units right
11. Find the asymptotes for $y = \tan 2\theta$
- 45 degree
 - all multiples of 45 degree
 - even multiples of 45 degree
 - odd multiples of 45 degree
12. Simplify the given expression $\frac{1 + \tan^2 \theta}{\tan^2 \theta}$
- $\csc^2 \theta$
 - $\tan^2 \theta$
 - $\sin^2 \theta$
 - $\csc^2 \theta$
13. Find $\tan \theta$ if $\sec \theta = -3$, $180^\circ < \theta < 270^\circ$.
- 2
 - $2\sqrt{10}$
 - $2\sqrt{2}$
 - 5
14. simplify $\sin\left(\frac{\pi}{2} - \theta\right)\sec \theta$
- $\tan \theta$
 - 1
 - $\csc \theta$
 - $\sin \theta$
15. Find the exact value of $\cos 2\theta$ if $\sin \theta = \frac{3}{4}$ and θ is between 0° and 90° .
- 0.125
 - 0.125
 - 0.50
 - 0.50
16. Find the exact value of $\tan 2\theta$, if $\cos \theta = \frac{4}{5}$ and θ is between 0° and 90° .
- $\frac{24}{7}$
 - $\frac{5}{4}$
 - $\frac{7}{25}$
 - $\frac{24}{25}$
17. Find the exact value of $\sin \frac{\theta}{2}$ if $\cos \theta = -\frac{3}{5}$ and θ is in the second quadrant.
- $\frac{2\sqrt{5}}{5}$
 - $-\frac{2\sqrt{5}}{5}$
 - $-\frac{1}{2}$
 - $\frac{1}{2}$
18. Find $\sin \frac{\theta}{2}$ if $\tan \theta = -\frac{8}{15}$; $90^\circ < \theta < 180^\circ$.
- $\frac{4\sqrt{17}}{17}$
 - $\frac{8}{9}$
 - $-\frac{4\sqrt{17}}{17}$
 - $\frac{3\sqrt{17}}{17}$

GRADE 10th Revision Worksheet

19 Find all solutions for θ given interval $2 \cos \theta - 1 = 0; 0 \leq \theta \leq 360$.

- a. 60°
- b. $60^\circ, 120^\circ$
- c. $60^\circ, 300$
- d. 30°

20. Solve equation: $\cos^2 \theta + 3 = 4 - \sin^2 \theta$

- a. 1
- b. 45°
- c. no solution
- d. infinitely many solution