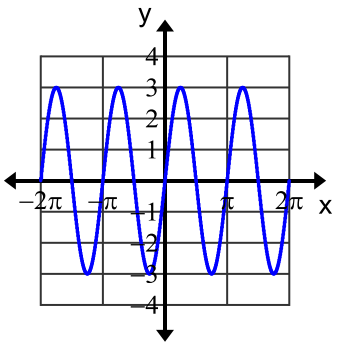
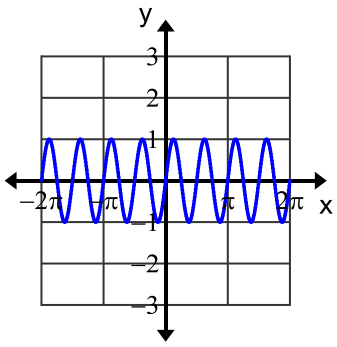
# Chapter 10 Practice Test 2

Name _____

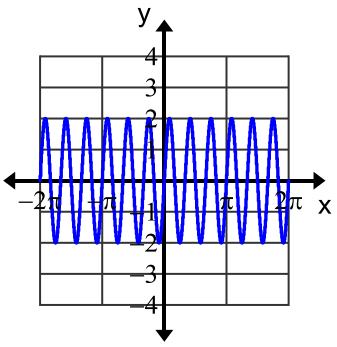
1.




2.




3.




Give the equation of each graph above. There have been no phase shifts.

Graph 1 = _____ Graph 2 = _____ Graph 3 = _____

Take the given equations and state the amplitude, period, and phase shift of each.

4. $y = 3\sin\left(2\theta^\circ + 10\right)$

amplitude: _____
period: _____
phase shift: _____

5. $y = 2\cos\left(3\theta^\circ - 30^\circ\right)$

amplitude: _____
period: _____
phase shift: _____

6. $y = 2\cos\left(10\theta^\circ - 60^\circ\right)$

amplitude: _____
period: _____
phase shift: _____

Write the equation of a sine function with each amplitude, period & phase shift.

7. amplitude = 5
period = 720°
phase shift = 10°

Equation: _____

8. amplitude = $\frac{1}{2}$
period = 360°
phase shift = −20°

Equation: _____

If $\alpha$ and $\beta$ are the measures of two first quadrant angles, find the exact value of each function.

_____15. If $\sin\ \alpha = \frac{60}{61}$ and $\tan\ \beta = \frac{4}{3}$, find $\cos\ (\alpha + \beta)$

_____16. If $\sin\ \alpha = \frac{5}{13}$ and $\sin\ \beta = \frac{40}{41}$, find $\sin\ (\alpha - \beta)$

_____17. If $\sin\ \alpha = \frac{3}{5}$ and $\cos\ \beta = \frac{40}{41}$, find $\sin\ (\alpha + \beta)$

Simplify.

18. sin x cot x

19. $\frac{\tan x}{\cot x}$

20. $\sin^2 x \cos^2 x + \sin^4 x$

21. $(1 - \sin x)(1 + \sin x)$

22. $\frac{1}{\sin^2 x} - \frac{\cos^2 x}{\sin^2 x}$

23. $\cos(90 - \theta)$

24. $\sin(180° - \theta)$