Lesson 4.4 Practice: Phase Shift and Vertical Shift

School Launch · Trigonometry · Unit 4: Graphs of the Trigonometric Functions · Worksheet A

Scientific calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. For $y = 2\cos\left(\frac{1}{2}\left(x - \frac{\pi}{4}\right)\right) - 3$, give the amplitude, period, phase shift and midline. EASY

2. For $y = 5\sin\left(3\left(x - \frac{\pi}{3}\right)\right) - 3$, give the amplitude, period, phase shift and midline. EASY

3. For $y = 3\sin\left(\left(x - \frac{\pi}{6}\right)\right) + 1$, give the amplitude, period, phase shift and midline. EASY

4. For $y = 2\sin\left(2\left(x - \frac{\pi}{3}\right)\right) + 1$, give the amplitude, period, phase shift and midline. MEDIUM

5. For $y = \sin\left(\left(x - \frac{\pi}{2}\right)\right) + 4$, give the amplitude, period, phase shift and midline. MEDIUM

6. For $y = 4\cos\left(3\left(x - \frac{\pi}{6}\right)\right)$, give the amplitude, period, phase shift and midline. MEDIUM

7. For $y = 2\cos\left(4\left(x - \frac{\pi}{3}\right)\right) - 4$, give the amplitude, period, phase shift and midline. MEDIUM

8. For $y = 2\sin\left(2\left(x - \frac{\pi}{4}\right)\right) - 4$, give the amplitude, period, phase shift and midline. HARD

9. For $y = 6\cos\left(4\left(x - \frac{\pi}{4}\right)\right)$, give the amplitude, period, phase shift and midline. HARD

10. For $y = 3\sin\left(4\left(x - \frac{\pi}{4}\right)\right)$, give the amplitude, period, phase shift and midline. HARD