This scavenger hunt deals with identifying amplitude, period, vertical shift, and phase shift from an equation and then using these values to identify a matching graph. Essentially, students are identifying the appropriate graph from the equation of a sinusoidal function.

Use the QR Codes listed in this document with graphs attached

Here is the list of questions

Students will need to use the next page to keep track of their work and order of the questions. The questions do NOT go in order from 1 to 10, it is the student's job to use the answer to identify the next question.

PDM Chapter 6 - Identifying a Sinusoidal Graph from an Equation   Name:______________________

6.3 Scavenger Hunt

Directions: For each of the QR Codes around the room, scan the QR code as plain text in order to see the equation of the sinusoidal function. Then find the amplitude, period, phase shift, and vertical shift of the graph and use this information to identify the matching graph. This will lead you to the next equation. Repeat this process until you have answered all questions and you are back to your starting question.

Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:	Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:
Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:	Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:
Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:	Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:
Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:	Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:
Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:	Question ______ leads to question ______ Amplitude: Period: Vertical Shift: Phase Shift:

6.3 Scavenger Hunt KEY

Identifying a Sinusoidal Graph from an Equation

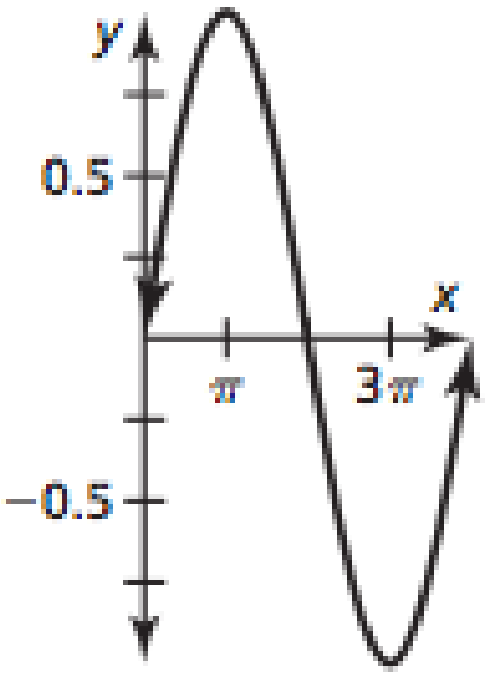
Directions: For each of the QR Codes around the room, scan the QR code as plain text in order to see the equation of the sinusoidal function. Then find the amplitude, period, phase shift, and vertical shift of the graph and use this information to identify the matching graph. This will lead you to the next equation. Repeat this process until you have answered all questions and you are back to your starting question.

Question ___1___ leads to question ___6___ Amplitude: 1 Period: 2π Vertical Shift: 4 Phase Shift: 0	Question __6____ leads to question ___9___ Amplitude: 3 Period: 2 Vertical Shift: 0 Phase Shift: 0
Question ___9___ leads to question __2____ Amplitude: 2 Period: 4 Vertical Shift: 0 Phase Shift: 0	Question __2____ leads to question __8____ Amplitude: 3 Period: π Vertical Shift: 1 Phase Shift: $\pi/4$
Question __8____ leads to question __10____ Amplitude: 1 Period: 8 Vertical Shift: 4 Phase Shift: 3	Question __10____ leads to question ___4___ Amplitude: .5 Period: $\pi/2$ Vertical Shift: 0 Phase Shift: 0
Question __4____ leads to question ___3___ Amplitude: 3 Period: 12 Vertical Shift: 0 Phase Shift: 0	Question __3____ leads to question __7____ Amplitude: 2 Period: 2π Vertical Shift: -1 Phase Shift: $3\pi/4$
Question __7____ leads to question ___5___ Amplitude: 1 Period: 2π Vertical Shift: 4 Phase Shift: 0	Question __5____ leads to question ___1___ Amplitude: 1 Period: 3π Vertical Shift: 0 Phase Shift: 0

Question #1

$$f(x) = cos(x) + 4$$

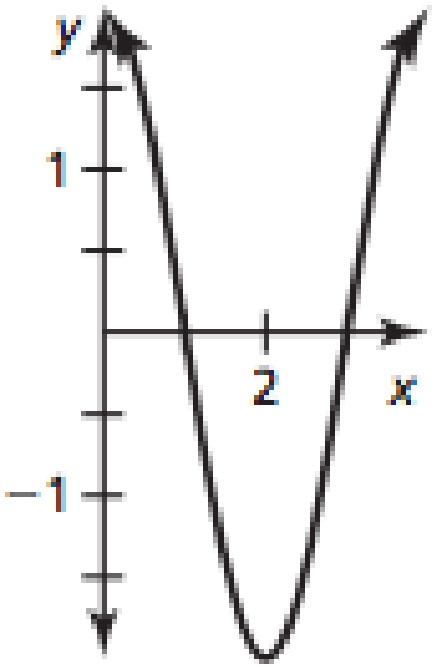
Last Answer:



Question #2:

$$f(x) = 3cos(2x - \frac{\pi}{2}) + 1$$

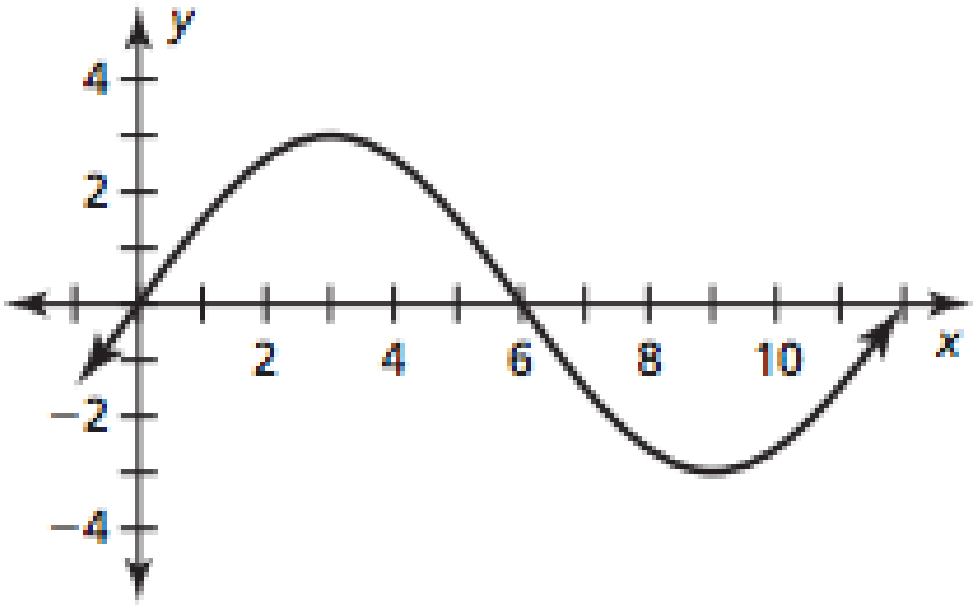
Last Answer:



Question #3:

$$f(x) = 2cos(x - \frac{3\pi}{4}) - 1$$

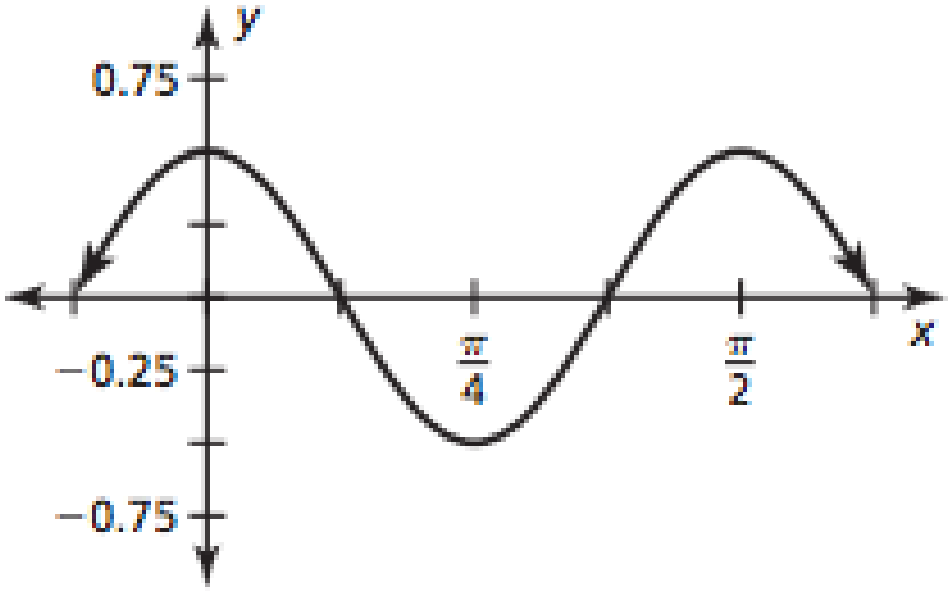
Last Answer:



Question #4:

$$f(x) = 3sin(\frac{\pi}{6}x)$$

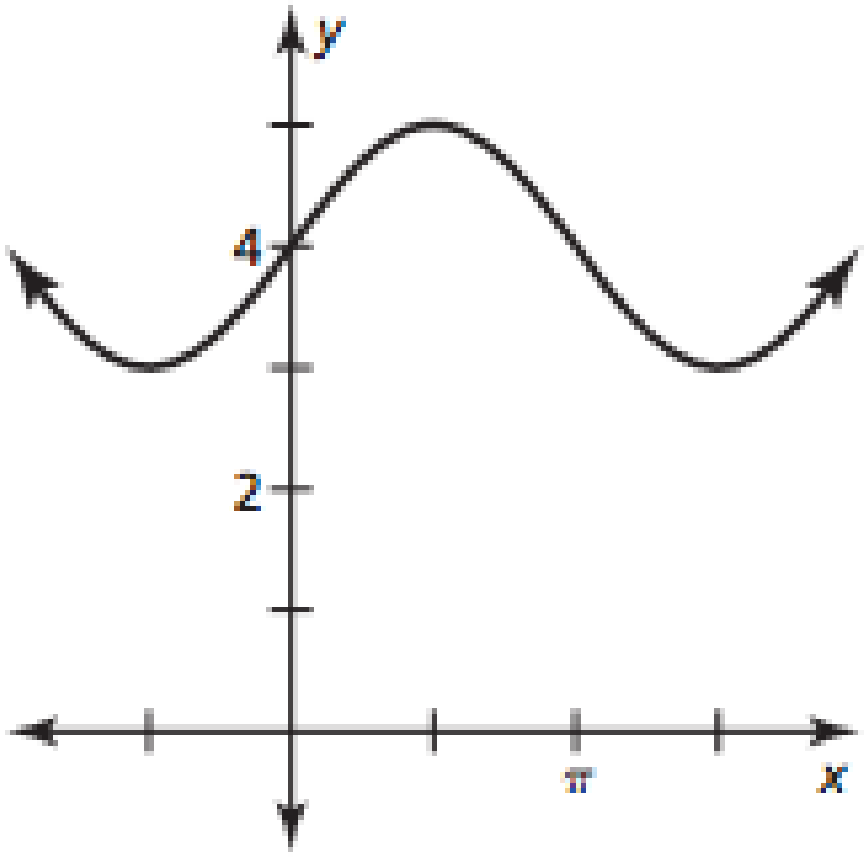
Last Answer:



Question #5:

$$f(x) = sin(\frac{2}{3}x)$$

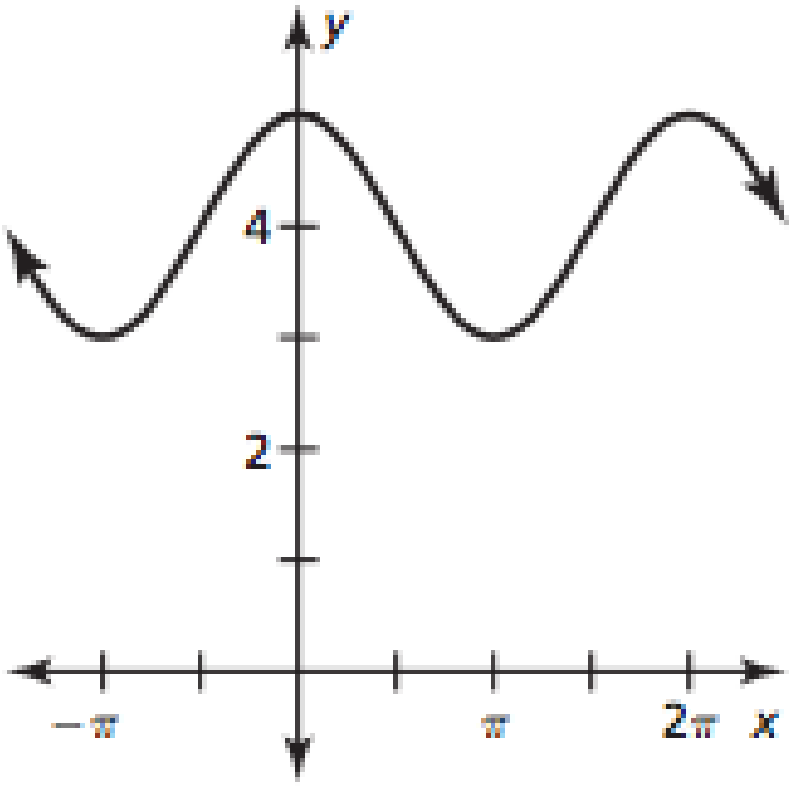
Last Answer:



Question #6:

$$f(x) = 3cos(\pi x)$$

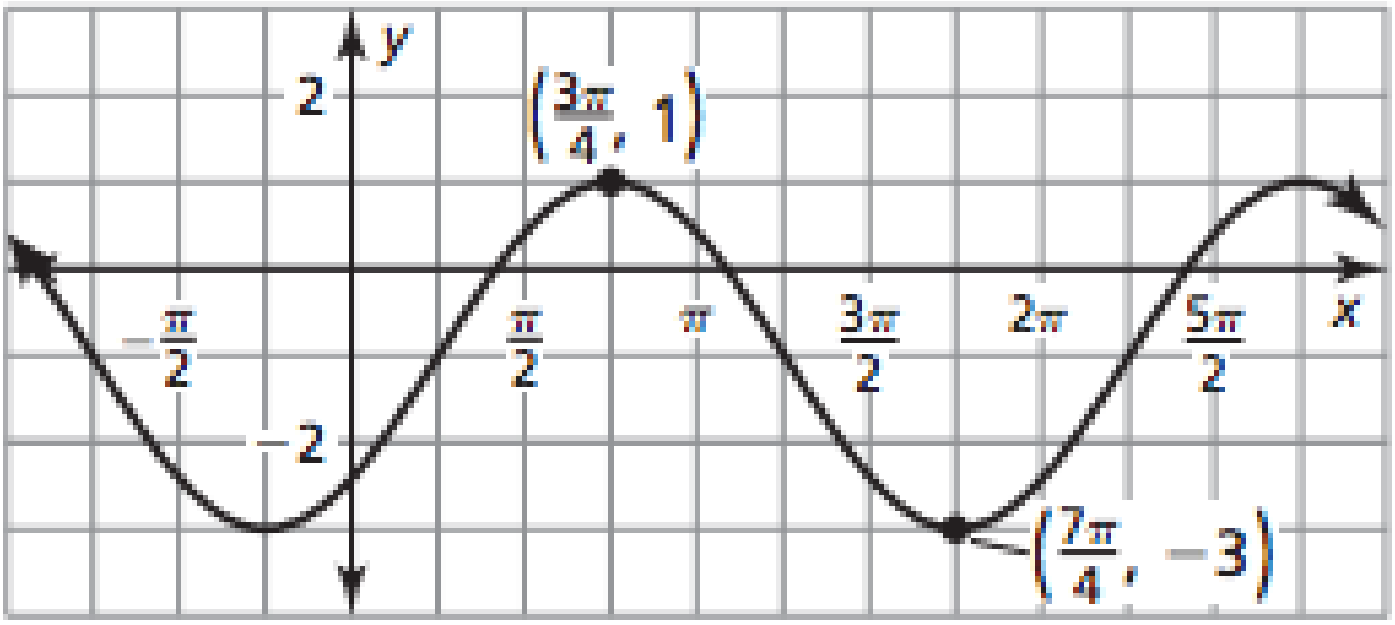
Last Answer:



Question #7:

$$f(x) = sin(x) + 4$$

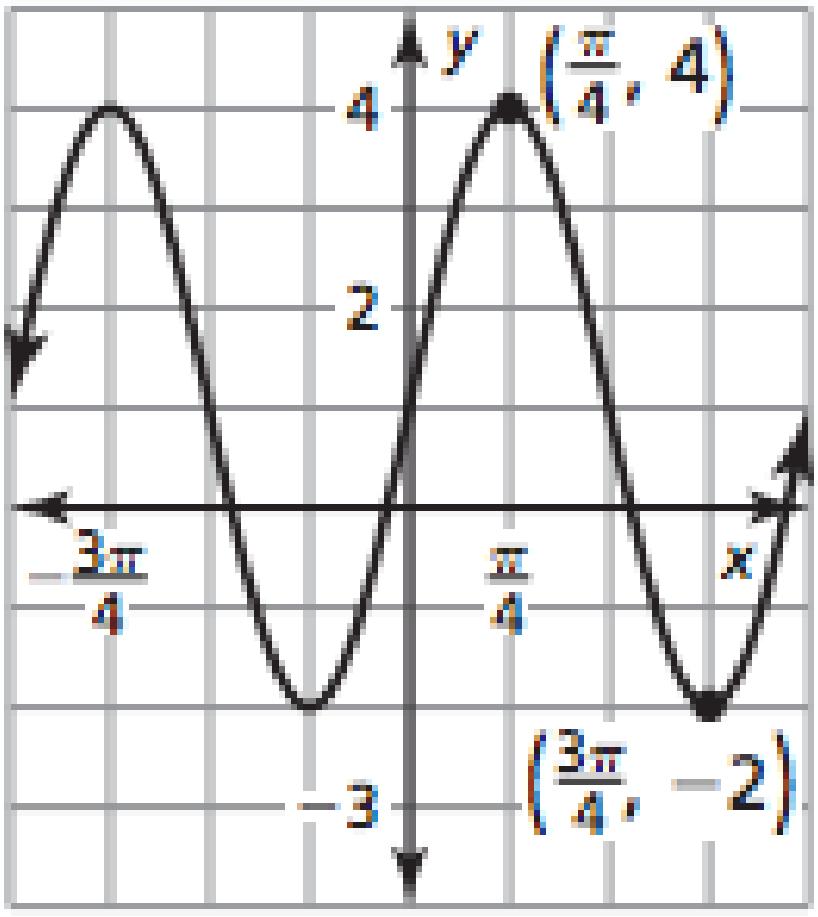
Last Answer:



Question #8:

$$f(x) = cos(\frac{\pi}{4}x - \frac{3\pi}{4}) + 4$$

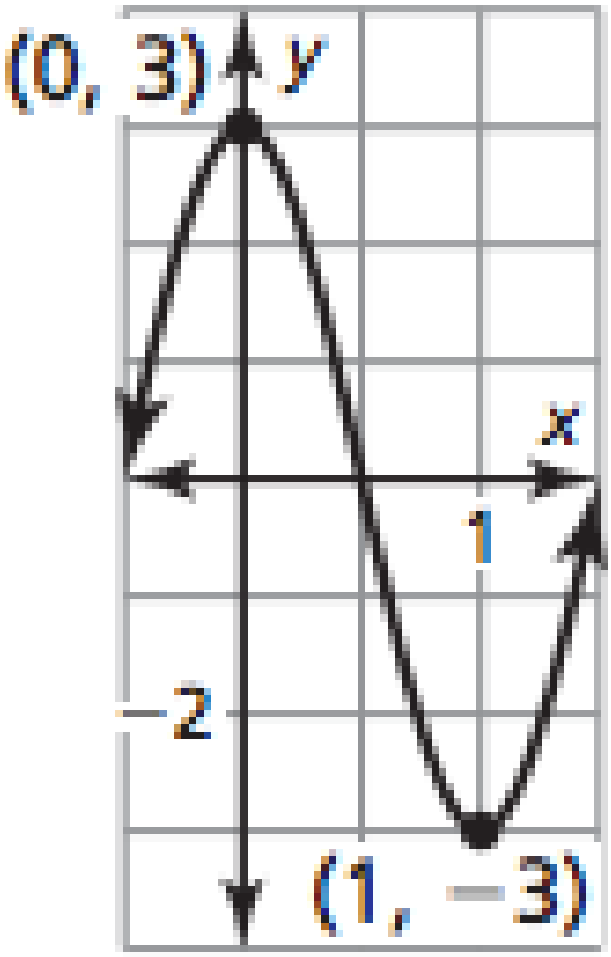
Last Answer:



Question #9:

$$f(x) = 2cos(\frac{\pi}{2}x)$$

Last Answer:



Question #10:

$$f(x) = \frac{1}{2}cos(4x)$$

Last Answer: