AFM – Unit 2 EXTRA REVIEW: Graphing Trig

**Part 1: Given the equation find the amplitude, period, vertical shift and phase shift.**

1) $y=2\sin(4(x-\frac{3π}{4}))+3$ Amplitude: \_\_\_\_\_\_

Period: \_\_\_\_\_\_ Phase Shift: \_\_\_\_\_\_\_\_\_ Vertical Shift \_\_\_\_\_\_\_\_\_

**Part 2: Given the graph find the amplitude, period, vertical shift and phase shift. Then write the equation.**

2. Amplitude \_\_\_\_\_\_\_\_\_\_\_\_ Phase shift \_\_\_\_\_\_\_\_\_\_\_\_

Vertical shift \_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_

 Sine Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. The table shows the height of a spring in cm after x seconds.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| seconds | 0 | 2 | 5 | 8 | 10 | 12 | 15 | 16 | 18 | 20 | 21 | 23 |
| Height | 1.0 | 3.2 | 6.2 | 10.4 | 9.5 | 6.8 | 3.4 | 1.2 | 3.6 | 6.5 | 8.4 | 10.0 |

1. Find a sine equation for that gives height as a function of time. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the period for this function? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Use your equation to predict what the height will be in 1 minute. \_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What is the average height of the spring? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What is the max and min height of the spring?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. The zebra on the carousel has a minimum height of 3 feet at 2 minutes and 6 feet at 5 minutes. Find:

Amplitude - \_\_\_\_\_\_\_\_ Vert. Shift- \_\_\_\_\_\_\_\_\_\_\_ Period - \_\_\_\_\_\_\_\_\_\_\_\_ Phase Shift - \_\_\_\_\_\_\_

 Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_