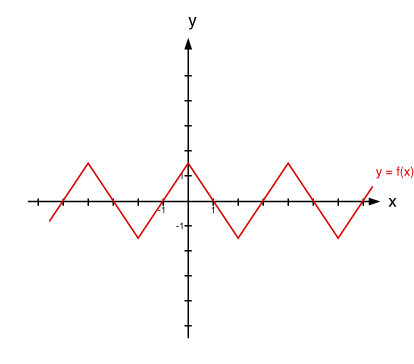
**Exit Card**

1. Complete the table for each of the following

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Parent  Function | Amplitude | Max value | Min Value | k | Phase shift | Axis of Curve | Equation |
| a) | sinx |  |  |  |  |  |  | y = ½ sin(x-45) + 2 |
| b) | cosx | 3 |  |  | 2 | 90 right | y=2 |  |
| c) | sinx |  |  | -4 | ½ | None | y=-2 |  |
| d) | cosx |  | 6 | -2 | 1 | 45 right |  |  |

1. The function shown is periodic.

|  |
| --- |
| Amplitude = |
| Period = |
| f(4)= |
| f(898)= |



1. Describe the following transformations for with respect to

.

a. Amplitude: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b. Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Axis of Curve: \_\_\_\_\_\_\_\_\_ d. Phase shift:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ f. Min:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Graph the following equation: y = 3cos (2x – 360) + 2
4. Given ,determine the amplitude, period, maximum, minimum and graph the function on the grid provided. Assume .
5. Given ,determine the amplitude, period, maximum, minimum and graph the function on the grid provided. Assume .
6. A Ferris wheel has radius of 7m. The centre of the wheel is 8 m above the ground. The Ferris wheel rotates at a constant speed of 15°/s. The height above the ground of the only red seat can be modeled by the function . (1 + 2 + 2 = 5 marks)
7. What is maximum height during the first rotation?
8. When is the red seat at its maximum height **c.** How long will take for the red seat to complete

during the first rotation? two full rotations?

1. State the transformations in a correct order for the following equation. (5 marks)

1. Determine the equation of the function if:
   1. the function is further stretched vertically by 2 and shifted 30 degrees right.
   2. the function is further stretched horizontally by 3 and shifted 2 units up.
   3. the function is further stretched horizontally by 1/4, vertically by 2.