Test PC and CP week 9 Take home Part

Name: _____ Period:_____ Date:_____

You must solve all problems in your notebook and staple the graphs into your notebook. Turn in the work electronically by Monday 10-24-2016 @11:59pm. You will need at least 6 graph sheets.

Question 1

1a) Plot the graph of the function below: (Use one graph sheet)

$$y = \cos(3x) - 2 \qquad for - \pi < x < \pi$$

1b) What is the amplitude of the graph above?

1c) What is the range of the graph above, leave answer in interval notation?

Question 2

2a) Plot the graph of the function below: (Use one graph sheet)

$$y = \operatorname{cosec}(x) + 2 \qquad for - 2\pi \leq x < 2\pi$$

2b) What is the period of the graph above?

2c) What is the range of the graph above, leave answer in interval notation?

2d) What is the domain of the graph above, leave answer in interval notation?

Question 3

3a) Plot the graph of the function below: (Use one graph sheet)

$$y = -Sin\left(x - \frac{\pi}{4}\right) \qquad for \;\; 0 < x < 4\pi$$

3b) What is the period of the graph above?

3c) What is the range of the graph above, leave answer in interval notation?

3d) What is the domain of the graph above, leave answer in interval notation?

Question 4

For what values of x, $0 \leq x \leq 4\pi$, does cos(x) = 1?

Plot the graph of the function above for the given domain to demonstrate your answer.

Question 5

5a) Plot the graph of the function below: (Use two graph sheet)

$$y = 4Sin(3x) \qquad for \quad -2\pi < x < 2\pi$$

5b) What is the period of the graph above?

5c) What is the range of the graph above, leave answer in interval notation?

5d) What is the domain of the graph above, leave answer in interval notation?