Name: _____Date : _____

IM 3 UNIT 5 UNIT TEST V1 – Trigonometry
Teacher: Mr. Santowski and Mr. Smith

Score:_____

PART 1 - CALCULATOR INACTIVE QUESTIONS

1. You were presented with two special right triangles, with which you can answer the following questions that deal with the special angles and their ratios.

(6 marks)

Draw the 30°-60°-90° right triangle here and label all sides and angles

Draw the 45°-45°-90° right triangle here and label all sides and angles

$\cos^{-1}\left(\frac{\sqrt{3}}{2}\right) =$

$\tan(60°) =$

$\sin(45°) =$

Solve the equation $2\cos(x) - 1 = 0$

If $f(x) = \tan(x)$, evaluate $f(30°)$

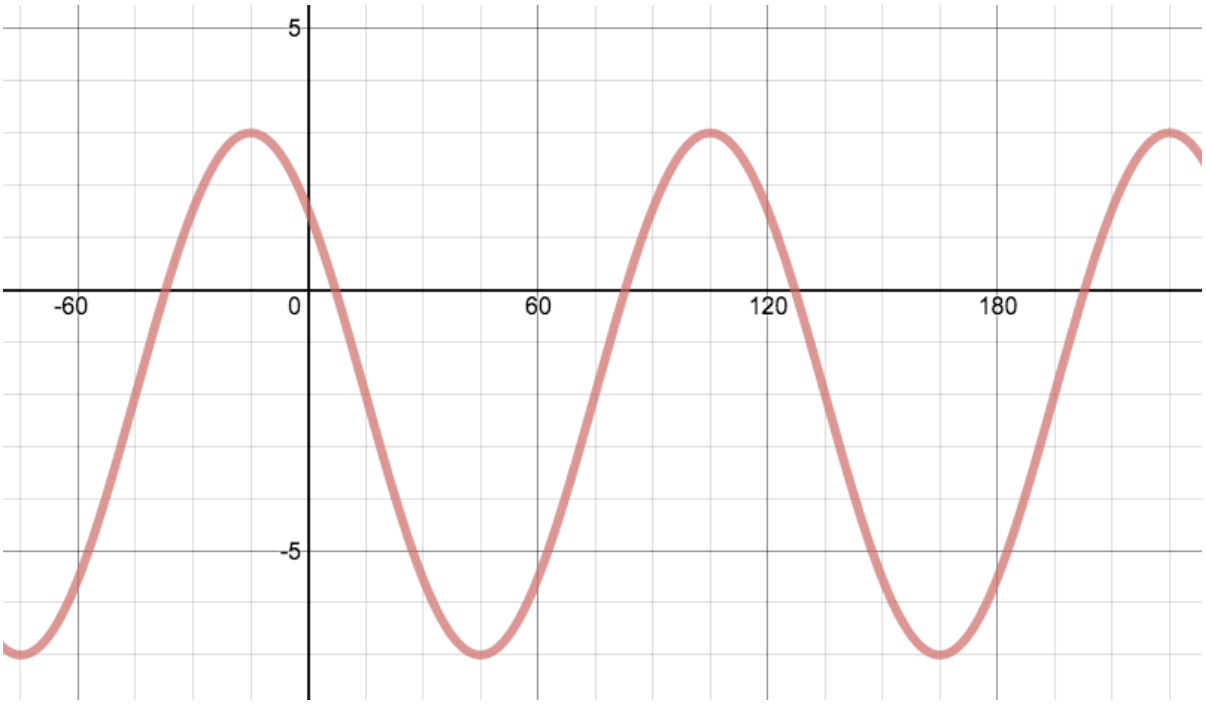
If $f(x) = \sin(x)$, solve $f(x) = \frac{1}{2}$

2. If the function f(x) = 3cos(2x) + 4 starts at x = 0 and complete 3 cycles, determine the period & amplitude & equation of the axis of the curve and the domain and range.

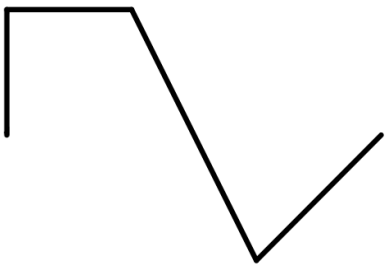
(5 marks)

3. Here is a graph of a transformed sine function. Use this graph to state the amplitude, period, axis of the curve and then write the equation of this sinusoidal function (use sin OR cosine as you wish).

(5 marks)



4. Draw 2 cycles of a graph of the given periodic function (see diagram) whose period is 20, the amplitude is 5 and whose axis of the curve is y = 8. Make sure that your sketch is properly scaled along the x- and y-axis. The cyclical pattern (i.e. the parent function) is shown at the right ➔



(4 marks)