

**MATH 1112 – Quiz 2 (Version 2) Solutions**

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Name \_\_\_\_\_

**Instructions.** No calculators allowed on this quiz!

1. Prove the trigonometric identity  $1 + \cot^2(\theta) = \csc^2(\theta)$ . Your proof must include a picture and some written words (not just equations).

2. Below are six formulas and five graphs. Match each formula with its graph.

a)  $y = 3 \sin(-\frac{1}{2}x)$  matches Graph 6

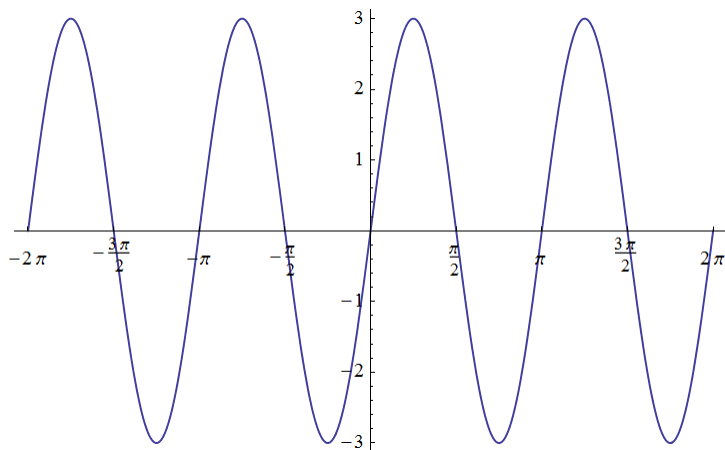
b)  $y = 3 \sin(2x)$  matches Graph 1

c)  $y = -3 \cos(2x)$  matches Graph 5

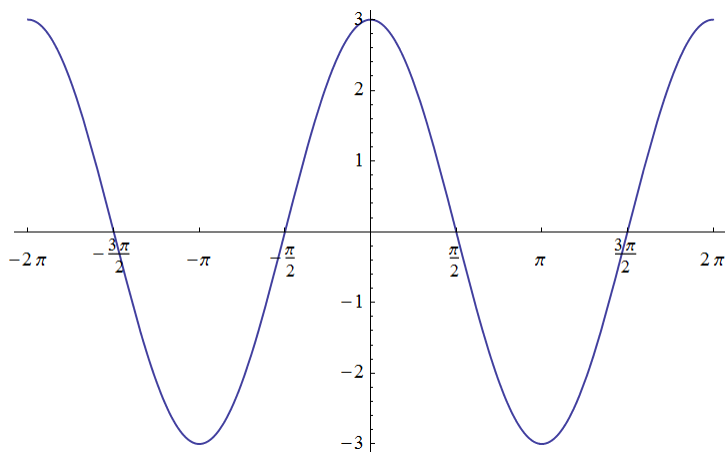
d)  $y = 3 \sin(\frac{1}{2}x)$  matches Graph 4

e)  $y = 3 \sin(x)$  matches Graph 3

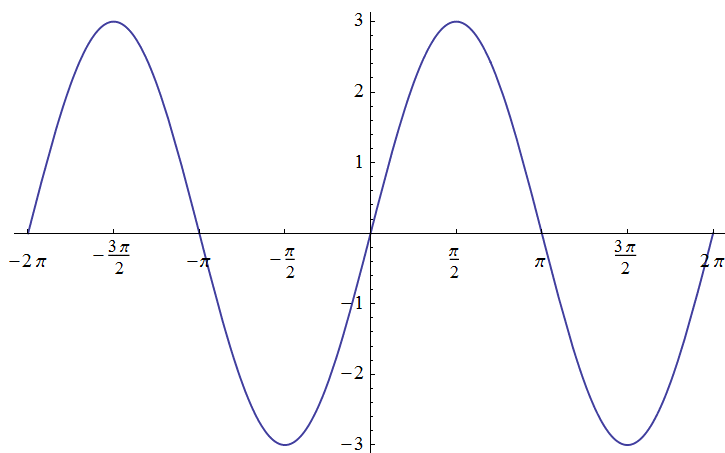
e)  $y = 3 \cos(x)$  matches Graph 2



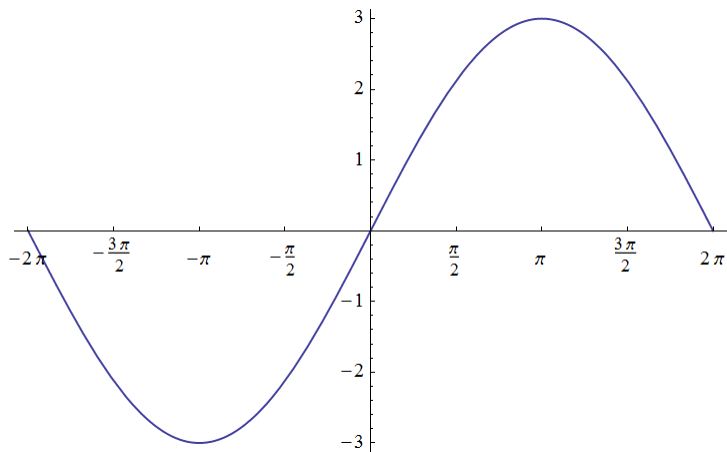
Graph 1



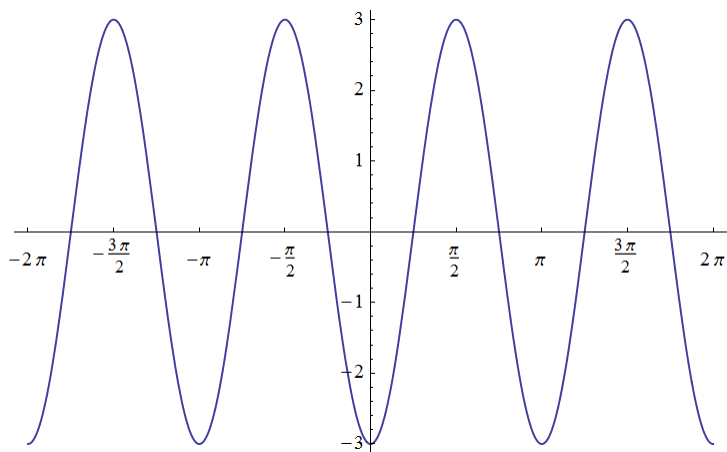
Graph 2



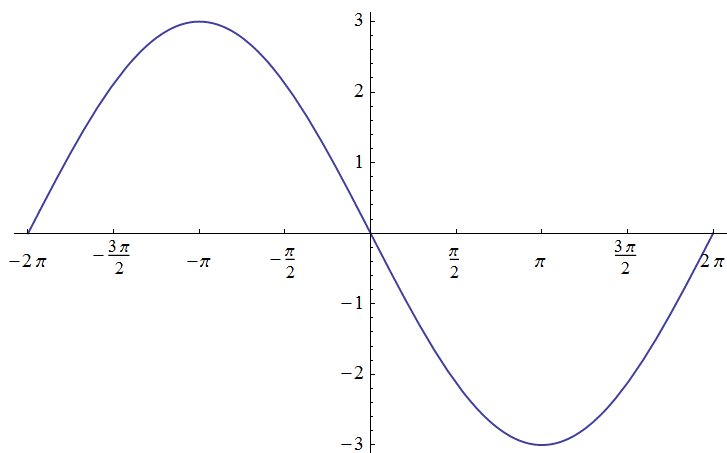
Graph 3



Graph 4



Graph 5



Graph 6