

Name \_\_\_\_\_

1) Find the values of sine and cosine below.

$$\sin\left(\frac{\pi}{6}\right) =$$

$$\cos\left(\frac{\pi}{6}\right) =$$

2) Find the integral below.

$$\int_0^{\frac{\pi}{6}} x \cos(x) dx$$

3) What is the “Pythagorean identity” involving tangent and secant? You may write your own answer, or select one of the following.

(A)  $\sec^2(\theta) + \tan^2(\theta) = 1$

(B)  $\sec^2(\theta) - \tan^2(\theta) = 1$

(C)  $\sec^2(\theta) - 1 = \tan^2(\theta)$

(D)  $\sec^2(\theta) + 1 = \tan^2(\theta)$

(E) All of the above

4) Find the integral below.

$$\int \tan^3(\theta) \sec(\theta) d\theta$$