

Directions: Answer all questions in the space provided. Please circle your answer. The point value of each question is indicated.

Find the following derivatives. No justification is necessary.

1. (2 points) $\frac{d}{dx}[\sin x]$

Solution:

$$\frac{d}{dx}[\sin x] = \cos x$$

2. (2 points) $\frac{d}{dx}[\cos x]$

Solution:

$$\frac{d}{dx}[\cos x] = -\sin x$$

3. (2 points) $\frac{d}{dx}[\tan x]$

Solution:

$$\frac{d}{dx}[\tan x] = \sec^2 x$$

4. (2 points) $\frac{d}{dx}[\sec x]$

Solution:

$$\frac{d}{dx}[\sec x] = \sec x \tan x$$

5. (2 points) $\frac{d}{dx}[\csc x]$

Solution:

$$\frac{d}{dx}[\csc x] = -\csc x \cot x$$

6. (2 points) $\frac{d}{dx}[\cot x]$

Solution:

$$\frac{d}{dx}[\cot x] = -\csc^2 x$$