

# Trigonometric Identities Exit Quiz

**Part A Instructions:** Complete each of the statements given below.

1.  $\sin^2(\theta) \cdot \tan^2(\theta) \cdot \operatorname{cosec}(\theta) \cdot \cot^2(\theta) =$  \_\_\_\_\_

2.  $\operatorname{cosec}^8(\theta) + \operatorname{cosec}^8(\theta) \cdot \cot^2(\theta) =$  \_\_\_\_\_

3.  $\frac{\sin(\theta)}{\cos(\theta)} + \frac{\cos(\theta)}{\sin(\theta)} =$  \_\_\_\_\_

4.  $\cos^4(\theta) - \sin^4(\theta) =$  \_\_\_\_\_

**Part B Instructions:** Answer the questions below.

1. Write two Pythagorean identities of trigonometry. (Any two)

a) \_\_\_\_\_

b) \_\_\_\_\_

2. Write two Quotient identities of trigonometry.

a) \_\_\_\_\_

b) \_\_\_\_\_

# Trigonometric Identities Exit Quiz

**Answers:** Part A Instructions: Complete each of the statements given below.

1.  $\sin^2(\theta) \cdot \tan^2(\theta) \cdot \operatorname{cosec}(\theta) \cdot \cot^2(\theta) = \sin(\theta)$

2.  $\operatorname{cosec}^8(\theta) + \operatorname{cosec}^8(\theta) \cdot \cot^2(\theta) = \operatorname{cosec}^{10}(\theta)$

3.  $\frac{\sin(\theta)}{\cos(\theta)} + \frac{\cos(\theta)}{\sin(\theta)} = \sec(\theta) \operatorname{cosec}(\theta)$

4.  $\cos^4(\theta) - \sin^4(\theta) = 2\cos^2(\theta) - 1$

Part B Instructions: Answer the questions below.

1. Write two Pythagorean identities of trigonometry. (Any two)

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

b)  $1 + \cot^2(\theta) = \operatorname{cosec}^2(\theta)$

2. Write two Quotient identities of trigonometry.

a)  $\tan(\theta) = \frac{\sin(\theta)}{\cos(\theta)}$

b)  $\cot(\theta) = \frac{\cos(\theta)}{\sin(\theta)}$