# Chapter 5 Test Retake Worksheet

In order to retake the Chapter 5 Test you must complete the following:

1.  Make corrections for each question you missed on the test.  Put these on a separate sheet of paper, showing all work.  Attach the corrections to the front of your original test.  Make sure your name is on the corrections, as well as the title *Chapter 5 Test Corrections*.

2.  Complete this Chapter 5 Test Retake Worksheet.

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### Trigonometric Identities

**Reciprocal Identities:**

| | | |
|---|---|---|
| 1. | 3. | 5. |
| 2. | 4. | 6. |

**Quotient Identities:**

7.                                              8.

**Pythagorean Identities:**

| | | |
|---|---|---|
| 9. | 12. | 15. |
| 10. | 13. | 16. |
| 11. | 14. | 17. |

# Chapter 5 Test Retake Worksheet

<div style="border: 1px solid black; padding: 10px;">

**Strategies for Simplifying Trig Expressions**

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

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**Examples:**

1. Simplify: $\dfrac{\sin^2 u - \cos^{2u}}{\sin u \cos u}$

2. Simplify: $\tan x + \cot x$

3. Simplify: $\sec x - \cos x$

4. Find all solutions: $3\cot x - 3 = 0$

# Chapter 5 Test Retake Worksheet

**Matching:  Answers can be used more than once.**

|   |   |   |
|---|---|---|
| 1. | $\dfrac{1}{\cot^2 x + 1}$ | A.  $\tan x$ |
| 2. | $\dfrac{\sin x \csc x}{\cot x}$ | B.  1 |
| 3. | $\sec^2 x \cot x - \cot x$ | C.  $\sin^2 x$ |
| 4. | $\dfrac{\csc x}{\sin x} - \dfrac{\cot x}{\tan x}$ | |
| 5. | $\dfrac{\sin x}{\cos x \tan x}$ | |

**Find all solutions:**

6.  $2\cos x - \sqrt{3} = 0$                      7.  $\sec^2 x = \sec x + 2$

**Find solutions in the interval [0, $2\pi$ ):**

8.  $2\cos^2 x - 1 = 0$                        9.  $2\sin^3 x + \sin^2 x = 0$

# Chapter 5 Test Retake Worksheet

**Find the exact value of the trigonometric function given that** $\sin u = \dfrac{12}{13}$ **and** $\cos v = -\dfrac{4}{5}$ **and u and v are in Quadrant II.**

10) $\sin(u+v)$

11) $\tan(u-v)$

12) $\sin 2u$

13) $\cos 2v$

14) $\sin\left(\dfrac{u}{2}\right)$

15) $\cos\left(\dfrac{u}{2}\right)$

16) Find the exact value of $\cos 75°$ using a sum formula.

17) Find the exact value of $\sin 75°$ using a half angle formula.

18) Simplify: $\sin(\pi - x)$