

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

Precalculus: 5.4 Quiz Review

1. Given  $\sin u = \frac{7}{25}$  &  $\cos v = \frac{3}{5}$ . Angle  $u$  is in Quad. II and Angle  $v$  is in Quad. IV. Find the exact

value of each:

a.  $\sin(u - v)$

b.  $\cos(u - v)$

c.  $\tan(u - v)$

2. Write the expression as the sine, cosine or tangent of a single angle and find the *exact value*.

$$\cos 261^\circ \cos 36^\circ + \sin 261^\circ \sin 36^\circ$$

3. Verify:  $\cos\left(\frac{\pi}{2} - x\right) = \sin x$

4. Solve over  $[0, 2\pi)$ :  $\sin\left(x + \frac{\pi}{3}\right) + \sin\left(x - \frac{\pi}{3}\right) = 1$

5. Find the exact value of each using a sum or difference formula:

a.  $\sin 255^\circ$

b.  $\cos 255^\circ$

c.  $\tan 255^\circ$

6. Write the expression as the sine, cosine or tangent of a single angle and find the *exact value*.

a.  $\sin 50^\circ \cos 20^\circ - \cos 50^\circ \sin 20^\circ =$

b.  $\cos 40^\circ \cos 20^\circ - \sin 40^\circ \sin 20^\circ =$

7. Verify:  $\sin\left(\frac{\pi}{2} + x\right) = \cos x$

8. Solve over  $[0, 2\pi)$ :  $\sin\left(x + \frac{\pi}{3}\right) + \sin\left(x - \frac{\pi}{3}\right) = \frac{1}{2}$