Name _____ **6.2 Lesson Quiz**

Two sides of a right triangle ABC (C is the right angle) are given. Find the indicated trigonometric function of the given angle. Give exact answers with rational denominators.

1. Find sin A when a = 5 and b = 8.

A) $\frac{8\sqrt{89}}{89}$ B) $\frac{\sqrt{89}}{8}$ C) $\frac{5\sqrt{89}}{89}$ D) $\frac{\sqrt{89}}{5}$

2. Find cos A when $a = \sqrt{6}$ and c = 7.

A) $\frac{43}{6}$ B) $\frac{\sqrt{6}}{7}$ C) $\frac{6}{7}$ D) $\frac{\sqrt{43}}{7}$

3. Find sec B when a = 2 and b = 9.

A) $\frac{2\sqrt{85}}{85}$ B) $\frac{9\sqrt{85}}{85}$ C) $\frac{2\sqrt{85}}{9}$ D) $\frac{\sqrt{85}}{2}$

4. Find cot A when a = 5 and c = 8.

A) $\frac{8\sqrt{39}}{39}$ B) $\frac{\sqrt{39}}{8}$ C) $\frac{5\sqrt{39}}{39}$ D) $\frac{\sqrt{39}}{5}$

Use identities to find the exact value of the indicated trigonometric function of the acute angle θ.

5. $\sin\theta = \frac{\sqrt{7}}{4}$, $\cos\theta = \frac{3}{4}$ Find tan θ.

A) $\frac{4\sqrt{7}}{7}$ B) $\frac{\sqrt{7}}{3}$ C) $\frac{3\sqrt{7}}{7}$ D) $\frac{4}{3}$

6. $\sin\theta = \frac{2\sqrt{2}}{3}$, $\cos\theta = \frac{1}{3}$ Find csc θ.

A) $\frac{\sqrt{2}}{4}$ B) $2\sqrt{2}$ C) 3 D) $\frac{3\sqrt{2}}{4}$

Use Fundamental Identities and/or the Complementary Angle Theorem to find the exact value of the expression. Do not use a calculator.

7. 5) $\sin^2 80° + \cos^2 80°$

A) 2 B) 1 C) 0 D) –1

8. $\sec^2 55° - \tan^2 55°$

A) 1 B) –1 C) 2 D) 0

9. $\sin 70° \csc 70°$

A) 1 B) –1 C) 0 D) 70

Use the definition or identities to find the exact value of the indicated trigonometric function of the acute angle θ.

10. $\sin \theta = \frac{3\sqrt{10}}{10}$ Find $\tan \theta$.

A) $\sqrt{10}$ B) 3 C) $\frac{1}{3}$ D) $\frac{\sqrt{10}}{3}$

11. $\cos \theta = \frac{5}{13}$ Find $\cot \theta$.

A) $\frac{13}{12}$ B) $\frac{5}{12}$ C) $\frac{13}{5}$ D) $\frac{12}{5}$

12. $\tan \theta = \frac{4}{3}$ Find $\cos \theta$.

A) $\frac{5}{3}$ B) $\frac{4}{5}$ C) $\frac{3}{5}$ D) $\frac{3}{4}$

Use Fundamental Identities and/or the Complementary Angle Theorem to find the exact value of the expression. Do not use a calculator.

13. $-\frac{\sec 40°}{\csc 50°}$

A) 0 B) –1 C) 1 D) undefined

14. $\csc^2 45° - \tan^2 45°$

A) 1 B) –1 C) 0 D) 2

15. $\cos 60° \sin 30° + \sin 60° \cos 30°$

A) 2 B) 1 C) –1 D) 0

16. Given $\sin 30° = \frac{1}{2}$, use trigonometric identities to find the exact value of $\tan \frac{\pi}{6}$.

A) $\sqrt{3}$ B) $3\sqrt{3}$ C) 3 D) $\frac{\sqrt{3}}{3}$