

Student: _____
Date: _____
Time: _____

Instructor: Garth Isaak
Course: precalc blitzer (1)
Book: Blitzer: Precalculus Essentials, 3e

Assignment: Trigonometry practice
diagnostic 2a

1. The point $P(x,y)$ on the unit circle that corresponds to a real number t is given. Find the value of the indicated trigonometric function at t .

$$\left(\frac{4}{7}, -\frac{\sqrt{33}}{7}\right) \text{ Find } \csc t.$$

A. $-\frac{7\sqrt{33}}{33}$

B. $\frac{\sqrt{33}}{7}$

C. $\frac{\sqrt{33}}{4}$

D. $-\frac{\sqrt{33}}{7}$

2. Find the exact value of the indicated trigonometric function of θ .

$$\cos \theta = \frac{2}{9}; \tan \theta < 0 \text{ Find } \sin \theta.$$

A. $-\sqrt{77}$

B. $-\frac{9}{2}$

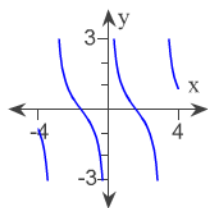
C. $-\frac{\sqrt{77}}{9}$

D. $-\frac{\sqrt{77}}{2}$

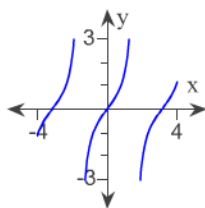
3. Match the function to its graph.

$$y = -\cot(x + \pi)$$

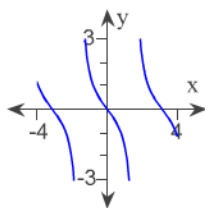
A.



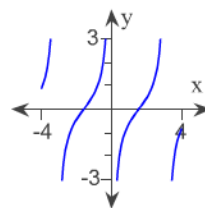
B.



C.



D.



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4. Use a sketch to find the exact value of the expression.

$$\cos \left[\tan^{-1} \left(\frac{4}{7} \right) \right]$$

- A. $\frac{7}{65}$
- B. $\frac{\sqrt{65}}{7}$
- C. $\frac{4}{7}$
- D. $\frac{7\sqrt{65}}{65}$

5. Complete the identity.

$$\frac{\sin x}{\cos x} + \frac{\cos x}{\sin x} = ?$$

- A. $\sin x \tan x$
- B. $1 + \cot x$
- C. $-2 \tan^2 x$
- D. $\sec x \csc x$

6. Complete the identity.

$$\frac{\cos x + \sin x}{\cos x} - \frac{\sin x - \cos x}{\sin x} = ?$$

- A. $2 + \sec x \csc x$
- B. $\sec x \csc x$
- C. $1 - \sec x \csc x$
- D. $2 - \sec x \csc x$

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7. Find all solutions of the equation.

$$\tan x \sec x = -2 \tan x$$

A. $x = \frac{\pi}{3} + 2n\pi$ or $x = \frac{5\pi}{3} + 2n\pi$ or $x = n\pi$

B. $x = \frac{2\pi}{3} + n\pi$ or $x = \frac{4\pi}{3} + n\pi$ or $x = n\pi$

C. $x = \frac{2\pi}{3} + 2n\pi$ or $x = \frac{4\pi}{3} + 2n\pi$ or $x = n\pi$

D. $x = \frac{\pi}{3} + n\pi$ or $x = \frac{5\pi}{3} + n\pi$ or $x = n\pi$

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1. A

2. C

3. D

4. D

5. D

6. B

7. C
