

Student: _____
Date: _____
Time: _____

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

Assignment: Trigonometry practice
diagnostic 3b

1. Use the unit circle to find the value of the trigonometric function.

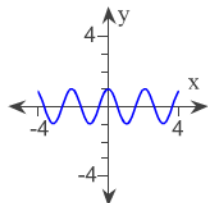
$$\csc \frac{\pi}{3}$$

- A. $\sqrt{2}$
 B. $\frac{\sqrt{3}}{2}$
 C. $\frac{2\sqrt{3}}{3}$
 D. 2

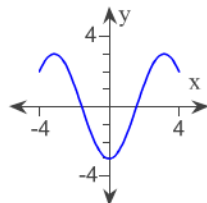
2. Graph the function.

$$y = \text{reduced}(3/4) \sin\left(x + \frac{\pi}{2}\right)$$

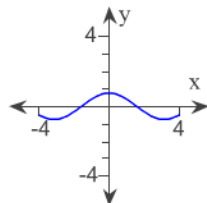
A.



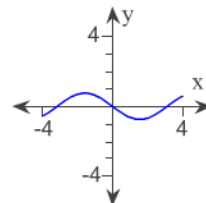
B.



C.



D.



3. Find the exact value of the expression.

$$\cos^{-1} \frac{\sqrt{3}}{2}$$

- A. $\frac{7\pi}{4}$
 B. $\frac{\pi}{4}$
 C. $\frac{\pi}{6}$
 D. $\frac{11\pi}{6}$

Student: _____
Date: _____
Time: _____

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

Assignment: Trigonometry practice
diagnostic 3b

4. Use a right triangle to write the expression as an algebraic expression. Assume that x is positive and in the domain of the given inverse trigonometric function.

$\sin(\tan^{-1} x)$

- A. $\frac{\sqrt{x^2 + 1}}{x^2 + 1}$
- B. $\frac{x\sqrt{x^2 - 1}}{x^2 - 1}$
- C. $\frac{x\sqrt{x^2 + 1}}{x^2 + 1}$
- D. $x\sqrt{x^2 + 1}$
-

5. A building 230 feet tall casts a 70 foot long shadow. If a person looks down from the top of the building, what is the measure of the angle between the end of the shadow and the vertical side of the building? (Assume the person's eyes are level with the top of the building.)
-

- A. $\tan^{-1}(0.30)$
- B. $\tan^{-1}(70)$
- C. $\tan^{-1}(3.29)$
- D. $\tan^{-1}(230)$
-

6. Complete the identity.

$\tan x(\cot x - \cos x) = ?$

- A. $-\sec^2 x$
- B. 1
- C. $1 - \sin x$
- D. 0
-

Student: _____
Date: _____
Time: _____

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

Assignment: Trigonometry practice
diagnostic 3b

7. Solve the equation on the interval $[0, 2\pi)$.

$$\cos 2x = \sqrt{2} - \cos 2x$$

- A. $0, \frac{2\pi}{3}, \pi, \frac{4\pi}{3}$
- B. $\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$
- C. $\frac{\pi}{8}, \frac{7\pi}{8}, \frac{9\pi}{8}, \frac{15\pi}{8}$
- D. no solution
-

Student: _____	Instructor: Garth Isaak	Assignment: Trigonometry practice
Date: _____	Course: precalc blitzer (1)	diagnostic 3b
Time: _____	Book: Blitzer: Precalculus Essentials, 3e	

1. C

2. C

3. C

4. C

5. A

6. C

7. C
