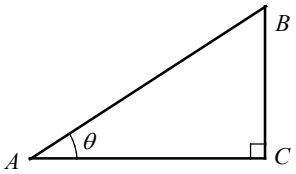
Chapter 15 Practice Test

1



Note: Figure not drawn to scale.

In the right triangle shown above, if $\tan\theta = \frac{3}{4}$, what is $\sin\theta$?

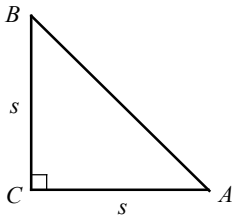
A) $\frac{1}{3}$

B) $\frac{1}{2}$

C) $\frac{4}{5}$

D) $\frac{3}{5}$

2



In the isosceles right triangle shown above, what is $\tan\angle A$?

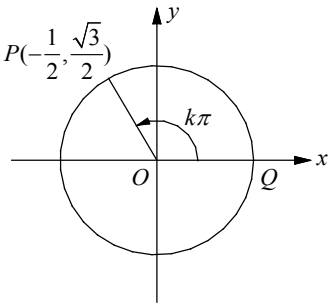
A) s

B) $\frac{1}{s}$

C) 1

D) $\frac{s}{\sqrt{2}}$

Questions 1 and 2 refer to the following information.



In the xy- plane above, O is the center of the circle, and the measure of $\angle POQ$ is $k\pi$ radians.

3

What is the value of k?

A) $\frac{1}{3}$

B) $\frac{1}{2}$

C) $\frac{2}{3}$

D) $\frac{3}{4}$

4

What is $\cos(k+1)\pi$?

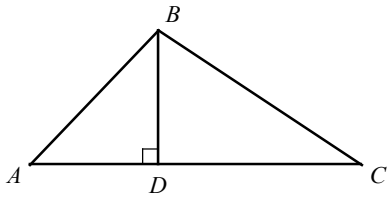
A) $\frac{1}{\sqrt{3}}$

B) $\frac{1}{2}$

C) $\frac{\sqrt{3}}{2}$

D) $\sqrt{3}$

5



In triangle ABC above, $\overline{AC} \perp \overline{BD}$. Which of the following does not represent the area of triangle ABC?

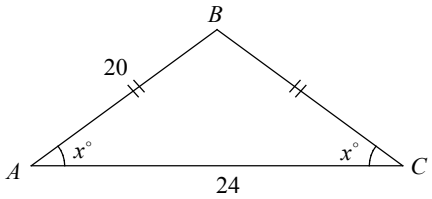
A) $\frac{1}{2}(AB\cos\angle A + BC\cos\angle C)(AB\cos\angle ABD)$

B) $\frac{1}{2}(AB\cos\angle A + BC\cos\angle C)(BC\sin\angle C)$

C) $\frac{1}{2}(AB\sin\angle ABD + BC\sin\angle CBD)(AB\sin\angle A)$

D) $\frac{1}{2}(AB\sin\angle ABD + BC\sin\angle CBD)(BC\cos\angle C)$

6



In the isosceles triangle above, what is the value of $\sin x^\circ$?

A) $\frac{1}{2}$

B) $\frac{3}{5}$

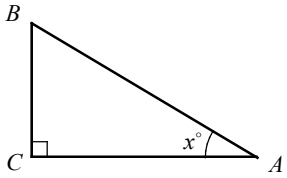
C) $\frac{2}{3}$

D) $\frac{4}{5}$

7

In triangle ABC, the measure of $\angle C$ is 90°, $AC = 24$, and $BC = 10$. What is the value of $\sin A$?

8



In the right triangle ABC above, the cosine of x° is $\frac{3}{5}$. If $BC = 12$, what is the length of AC?

9

If $\sin(5x-10)^\circ = \cos(3x+16)^\circ$, what is the value of x?