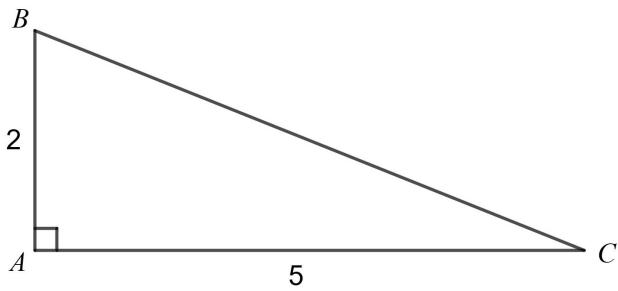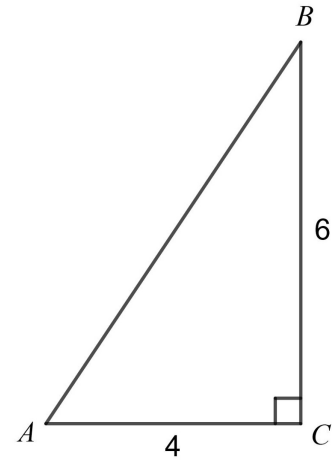# Trigonometric Ratio Practice Questions

DO NOT USE A CALCULATOR ON ANY OF THE FOLLOWING QUESTIONS UNLESS INDICATED.
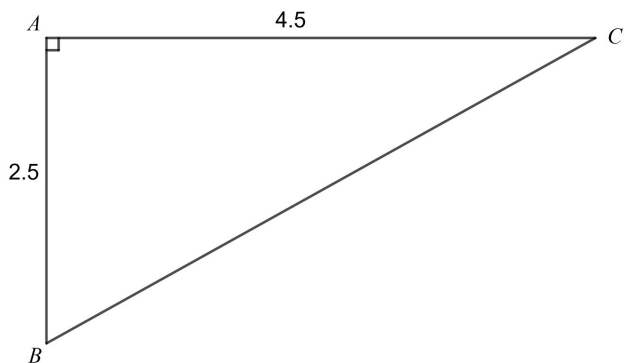

1. In Triangle ABC above, what is the value of $\sin B$?

(A) $\dfrac{2}{\sqrt{29}}$

(B) $\dfrac{2}{5}$

(C) $\dfrac{5}{\sqrt{29}}$

(D) $\dfrac{5}{2}$

2. In Triangle ABC above, what is the value of $\cos B$?

(A) $\dfrac{2}{\sqrt{13}}$

(B) $\dfrac{3}{\sqrt{13}}$

(C) $\dfrac{2}{3}$

(D) $\dfrac{3}{2}$

A —— 4.5 —— C

2.5

B

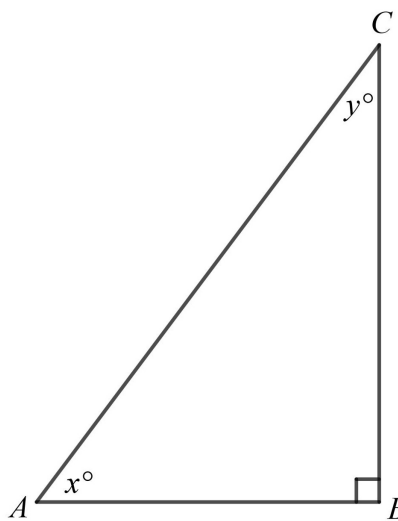**3.** In Triangle ABC above, what is the value of $\tan C$?

(A) $\dfrac{5}{9}$

(B) $\dfrac{5}{\sqrt{106}}$

(C) $\dfrac{9}{\sqrt{106}}$

(D) $\dfrac{9}{5}$

4. FREE RESPONSE: In Triangle FGH, the measure of $\angle G$ is $90°$ and $FG = 3$. If $\tan F = \dfrac{4}{3}$, what is the length of $\overline{FH}$?
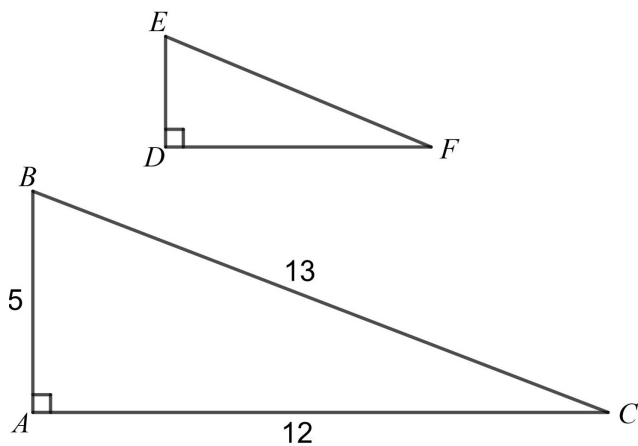
5. (CALCULATOR) FREE RESPONSE: In Triangle ABC, the measure of $\angle C$ is $90°$ and $AB = 26$. If $\sin B = \dfrac{5}{13}$, what is the length of $\overline{BC}$?

6. FREE RESPONSE: Triangle LMN has right angle M. If $\cos L = \dfrac{3}{5}$, what is the value of $\sin N$?

C

$y°$

$x°$

A ———————— B

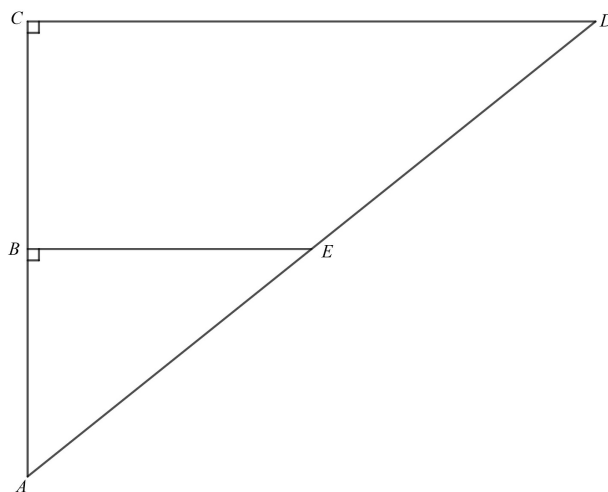Note: Figure not drawn to scale.

7. FREE RESPONSE: In Triangle ABC above, the sine of $y°$ is 0.8. What is the cosine of $x°$?

Note: Figure not drawn to scale.

8. In the figure above, triangle ABC is similar to triangle DEF and $\angle B = \angle E$. What is the value of $\tan(F)$?

(A) $\dfrac{5}{12}$

(B) $\dfrac{5}{13}$

(C) $\dfrac{12}{13}$

(D) $\dfrac{12}{5}$

Note: Figure not drawn to scale.

9. (CALCULATOR) FREE RESPONSE: In the figure above, $\cos(D) = \dfrac{4}{5}$. If $CD = 16$ and $DE = 10$, what is the length of $\overline{BC}$?

10. (CALCULATOR) FREE RESPONSE: In triangle DEF, the measure of $\angle E$ is $90°$, $DE = 12$ and $EF = 16$. Triangle LMN is similar to triangle DEF, where vertices L, M, and N correspond to vertices D, E, and F, respectively, and each side of triangle LMN is $\dfrac{2}{7}$ the length of the corresponding side of triangle DEF. What is the value of $\cos N$?

Additional Trigonometry Topics Practice Questions

DO NOT USE A CALCULATOR ON ANY OF THE FOLLOWING QUESTIONS UNLESS INDICATED.

1. If $x° + y° = 90°$ and $\cos y° = \dfrac{7}{13}$, what is the value of $\sin x°$?

(A) $\dfrac{13}{7}$

(B) $\dfrac{6}{13}$

(C) $\dfrac{7}{13}$

(D) $\dfrac{6}{7}$

2. If $\sin n = \dfrac{3}{x}$ and $x \neq 0$, what is n in terms of x ?

(A) $\sin^{-1}(\dfrac{3}{x})$

(B) $\sin(3x)$

(C) $\sin^{-1}(\dfrac{x}{3})$

(D) $\sin(\dfrac{x}{3})$

3. In a right triangle, one angle measures $w°$, where $\sin w° = \dfrac{5}{13}$. What is $\cos(90° - w°)$?

(A) $\dfrac{5}{13}$

(B) $\dfrac{12}{13}$

(C) $\dfrac{8}{13}$

(D) $\dfrac{13}{5}$

4. If $2\tan b = \dfrac{3n}{4m}$, what is b in terms of m and n ?

(A) $\tan^{-1}(\dfrac{8m}{3n})$

(B) $\tan^{-1}(\dfrac{6n}{4m})$

(C) $\tan^{-1}(\dfrac{4m}{6n})$

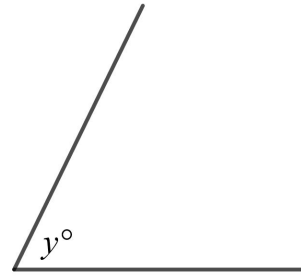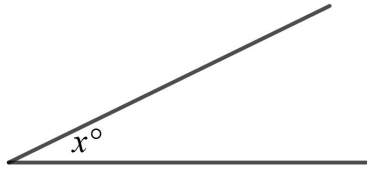(D) $\tan^{-1}(\dfrac{3n}{8m})$
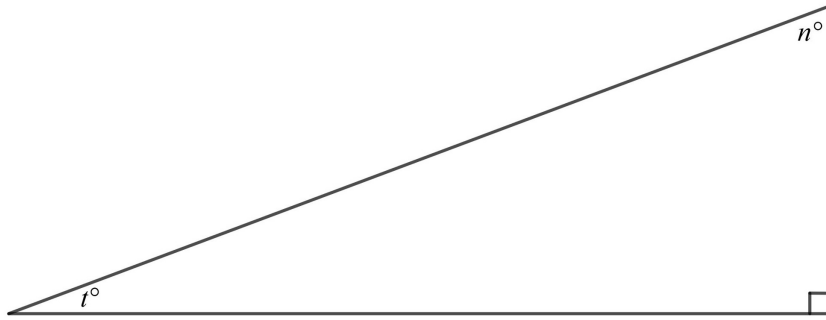
Note: Figure not drawn to scale.

5. FREE RESPONSE: In the triangle above, the cosine of $t°$ is 0.35. What is the sine of $n°$?

6. If $\sin(90° - x°) = n$, which of the following must be true for all values of x?

   (A) $\cos(x°) = n$

   (B) $\cos(90° - x°) = n$

   (C) $\sin(x°) = 90 - n$

   (D) $\sin(90° - n°) = x$

7. If $\dfrac{\cos x°}{4} = \dfrac{n}{8t}$, what is x in terms of n and t?

   (A) $\cos(\dfrac{n}{2t})$

   (B) $\cos^{-1}(\dfrac{n}{2t})$
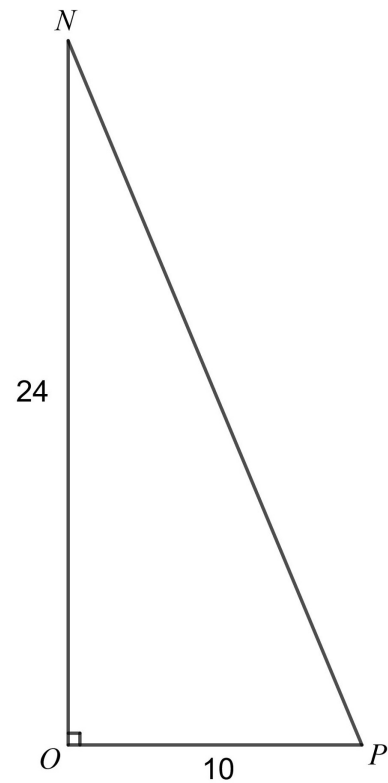
   (C) $\cos(\dfrac{t}{2n})$

   (D) $\cos^{-1}(\dfrac{t}{2n})$

Note: Figures not drawn to scale.

8. (CALCULATOR) The angles shown above are acute and $\sin x° = \cos y°$. If $x = 3z + 5$ and $y = 2z - 10$, what is the value of z?

(A) 15

(B) 17

(C) 19

(D) 37

9. FREE RESPONSE: If $n° = \cos^{-1}(\dfrac{1}{\sqrt{2}})$, what is the value of n?

10. (CALCULATOR) FREE RESPONSE : In Triangle NOP above, point K (not shown) lies on $\overline{NP}$. What is the value of $\cos(\angle KOP) - \sin(\angle NOK)$?