Trig Practice

Name: _____ **Date:** _____

1. P is a point on the terminal arm of an angle θ in standard position. Suppose $\theta = -750^\circ$. Where is P located?

   A. in quadrant I

   B. in quadrant III

   C. in quadrant IV

   D. on the positive y-axis

2. If $\cot\theta > 0$, then the terminal side of θ may lie in what quadrant(s)?

   A. I and II B. I and III

   C. II only D. II and IV

3. Which of the following angles is coterminal with -610°?

   A. 20° B. 70° C. 110° D. 610°

4. What is the reference angle of -820°?

   A. -60° B. 10° C. 60° D. 80°

5. Express $\sin 280^\circ$ as a function of a positive acute angle in terms of $\sin x$.

   A. $-\sin 80^\circ$ B. $\sin 80^\circ$

   C. $-\sin 10^\circ$ D. $\sin 10^\circ$

6. Express $\tan(-310^\circ)$ as a function of a positive acute angle in terms of $\tan x$.

   A. $\tan 50^\circ$ B. $-\tan 40^\circ$

   C. $-\tan 50^\circ$ D. $\tan 40^\circ$

7. Express $\cos(-50^\circ)$ as a function of a positive acute angle in terms of $\cos x$.

   A. $\cos 50^\circ$ B. $-\cos 40^\circ$

   C. $-\cos 50^\circ$ D. $\cos 40^\circ$

8. Write an expression to represent any angle coterminal with the angle 170° (n is an integer).

   A. $360^\circ + n(170^\circ)$ B. $170^\circ + n(360^\circ)$

   C. $170^\circ + n(180^\circ)$ D. $n(240^\circ)$

9. If the point $P(-4, 1)$ is a point on the terminal side of angle θ in standard position, then what is the exact value of $\csc\theta$?

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12. Find the numerical value of $\sin 49^\circ 23'$.

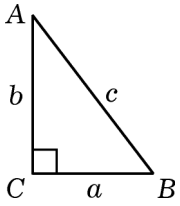
13. Express $\cos 295^\circ$ as a function of a positive acute angle.

14. Which of the following ratios is equivalent to $\frac{1}{\cos}$?

   A. $\frac{\text{opposite}}{\text{hypotenuse}}$ B. $\frac{\text{hypotenuse}}{\text{adjacent}}$

   C. $\frac{\text{hypotenuse}}{\text{opposite}}$ D. $\frac{\text{opposite}}{\text{adjacent}}$

15. Given the triangle shown, which of the following is true?



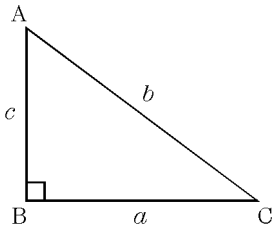
A. $\sin B = \frac{c}{b}$

B. $\cos A = \frac{c}{b}$

C. $\tan A = \frac{b}{a}$

D. $\sin B = \frac{b}{c}$

16. Which of the following statements is *incorrect* for $\triangle ABC$?



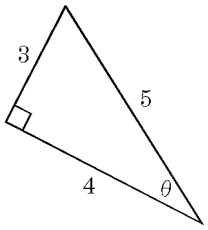
A. $\sin A = \frac{c}{b}$

B. $\tan A = \frac{a}{c}$

C. $a^2 + c^2 = b^2$

D. $\tan C = \frac{c}{a}$

17. Given the following triangle, $\cos\theta =$ _____.



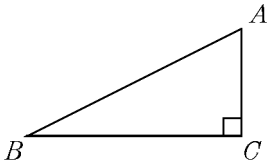
A. $\frac{3}{5}$ B. $\frac{4}{5}$

C. $\frac{4}{3}$ D. $\frac{5}{3}$

18. If $\sin\angle B = \frac{4}{5}$ and $\cos\angle B = \frac{3}{5}$, what is $\tan\angle B$?

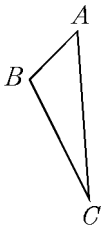
A. $\frac{4}{3}$ B. $\frac{3}{4}$ C. $\frac{7}{5}$ D. $\frac{1}{5}$

19. In the triangle below, $\sin B = \frac{8}{17}$. Find $\cos A$.



A. $\frac{8}{17}$ B. $\frac{17}{15}$ C. $\frac{8}{15}$ D. $\frac{15}{17}$

20. For the triangle shown, $m\angle B = 90$ and $\cos C = \frac{15}{17}$. What is $\cos A$?



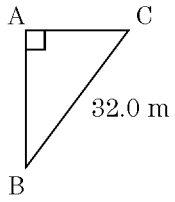
A. $\frac{15}{8}$ B. $\frac{8}{15}$ C. $\frac{15}{17}$ D. $\frac{8}{17}$

21. If $\sin\theta = -\frac{2}{5}$ and $\tan\theta > 0$, then what is the $\cos\theta$ expressed as an exact value?

22. In $\triangle ABC$, calculate $\angle C$ to the nearest degree given that $AC = 23.0$ m.

A. 36° B. 44°

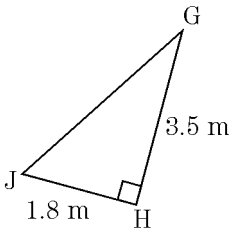
C. 48° D. 54°



23. In the triangle, determine $\angle J$ to the nearest degree.

A. 27° B. 31°

C. 53° D. 63°



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1.
Answer: C
Objective: F.TF.2

2.
Answer: B
Objective: F.TF.2

3.
Answer: C
Objective: F.TF.2

4.
Answer: D
Objective: F.TF.2

5.
Answer: A
Objective: F.TF.2

6.
Answer: A
Objective: F.TF.2

7.
Answer: A
Objective: F.TF.2

8.
Answer: B
Objective: F.TF.2

9.
Answer: $\sqrt{17}$
Objective: F.TF.2

10.
Answer: $\sqrt{17}$
Objective: F.TF.2

11.
Answer: $\sqrt{17}$
Objective: F.TF.2

12.
Answer: 0.7591
Objective: F.TF.2

13.
Answer: $\cos 65^\circ$ or $\sin 25^\circ$
Objective: F.TF.2

14.
Answer: B
Objective: G.SRT.6

15.
Answer: D
Objective: G.SRT.6

16.
Answer: A
Objective: G.SRT.6

17.
Answer: B
Objective: G.SRT.6

18.
Answer: A
Objective: G.SRT.6

19.
Answer: A
Objective: G.SRT.7

20.
Answer: D
Objective: G.SRT.7

21.
Answer: $-\frac{\sqrt{21}}{5}$
Objective: G.SRT.7

22.
Answer: B
Objective: G.SRT.8

23.
Answer: D
Objective: G.SRT.8