

Multiple Choice

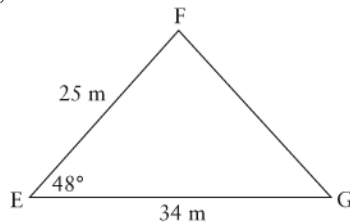
Identify the choice that best completes the statement or answers the question.

- Determine the exact value of $\tan 330^\circ$.
 - $-\sqrt{3}$
 - $-\frac{1}{\sqrt{3}}$
 - $\frac{1}{\sqrt{3}}$
 - $\sqrt{3}$
- Determine the exact value of $\cos 225^\circ$.
 - $\frac{\sqrt{3}}{2}$
 - $\frac{1}{\sqrt{2}}$
 - $\frac{1}{2}$
 - $-\frac{1}{\sqrt{2}}$
- Determine the exact value of $\sin 240^\circ$.
 - $\sqrt{3}$
 - $\frac{\sqrt{3}}{2}$
 - $-\frac{1}{2}$
 - $-\frac{\sqrt{3}}{2}$
- Determine the angles between 0° and 360° for which $\cos \theta = 0.4561$. Round your answers to the nearest degree.
 - 63° and 117°
 - 63° and 297°
 - 117° and 297°
 - 297° and 333°
- Determine the angles between 0° and 360° for which $\sin \theta = -0.8910$. Round your answers to the nearest degree.
 - 63° and 117°
 - 63° and 297°
 - 117° and 243°
 - 243° and 297°
- The exact value of $\sin 60^\circ \times \tan 45^\circ + \cos 30^\circ$ is:
 - $\sqrt{3}$
 - $\frac{4}{\sqrt{3}}$
 - $\frac{\sqrt{3}}{2}$
 - 1
- If $\tan \alpha \cong -0.643$, then the terminal arm for angle α lies in:
 - quadrant 1 or quadrant 3
 - quadrant 3
 - quadrant 2 or quadrant 4
 - quadrant 1
- Which of the following angles is not co-terminal with a 315° angle?
 - -45°
 - 45°
 - 675°
 - 1035°

9. In order to find the 3 primary trig ratios for an angle measuring 210° , what reference angle should be used?
- a) 60° b) 30° c) -30° d) -150°
10. The CAST rule is used to:
- a) find co-terminal angles
 b) find reference angles
 c) remember which ratio(s) is/are negative in each quadrant
 d) remember which ratio(s) is/are positive in each quadrant

Full Solution

11. The CN Tower in Toronto is 553 m tall. What is the exact length of the shadow of the tower when the angle of elevation of the sun is 30° ?
12. In $\triangle ABC$, $\angle A = 58^\circ$, $BC = 12$, and $AB = 14$. Determine the measure of $\angle C$, to the nearest tenth of a degree.
13. In $\triangle BEN$, $BE = 24$, $BN = 20$, and $EN = 19$. Find the measure of $\angle B$, to the nearest tenth of a degree.
14. Calculate the perimeter of $\triangle EFG$, to the nearest metre.



15. Determine an exact value for the expression $\sin 240^\circ \tan 330^\circ + \cos 300^\circ \tan 225^\circ$.
16. The Inco Superstack in Sudbury, Ontario, is the tallest chimney in Canada. It is 380 m high. From a certain point, A, on level ground, the angle of elevation to its top, at point C, is 20° . From a point B closer to the Superstack, the angle of elevation to the top is 40° . How far apart, to the nearest tenth of a metre, are A and B?
17. $P(-6,3)$ lies on the terminal arm of angle β in standard position.
- a) Draw a sketch of angle β
 b) Determine the value of r to the nearest tenth
 c) Determine the exact primary trig ratios for angle β
 d) Calculate the measure of β to the nearest degree.
18. The terminal arm of angle θ lies in quadrant 4 and $\tan \theta = \frac{-3}{4}$.
- a) Draw a sketch of angle θ .
 b) Determine the exact values of x , y , r , $\sin \theta$, and $\cos \theta$.
 d) Determine the measure of angle θ to the nearest degree.