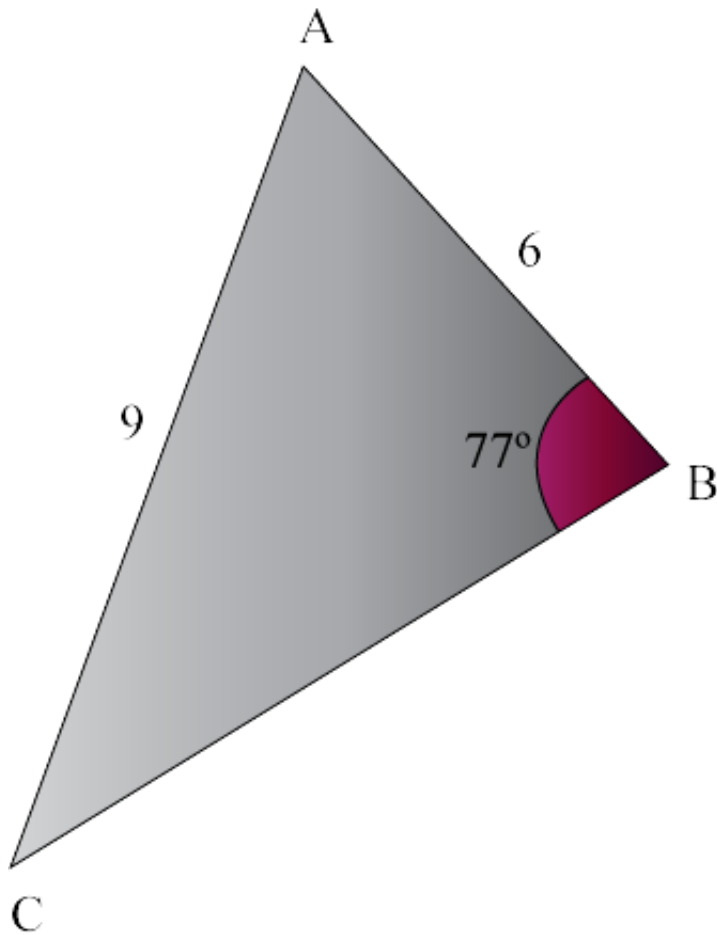




Eleventh Grade - Trigonometry

1) What is the size of Angle C?



- 80.5°
- 40.5°
- 10.5°
- 20.5°

2) If $\tan x + \cot x = 2$, find the value of $\tan^2 x + \cot^2 x$

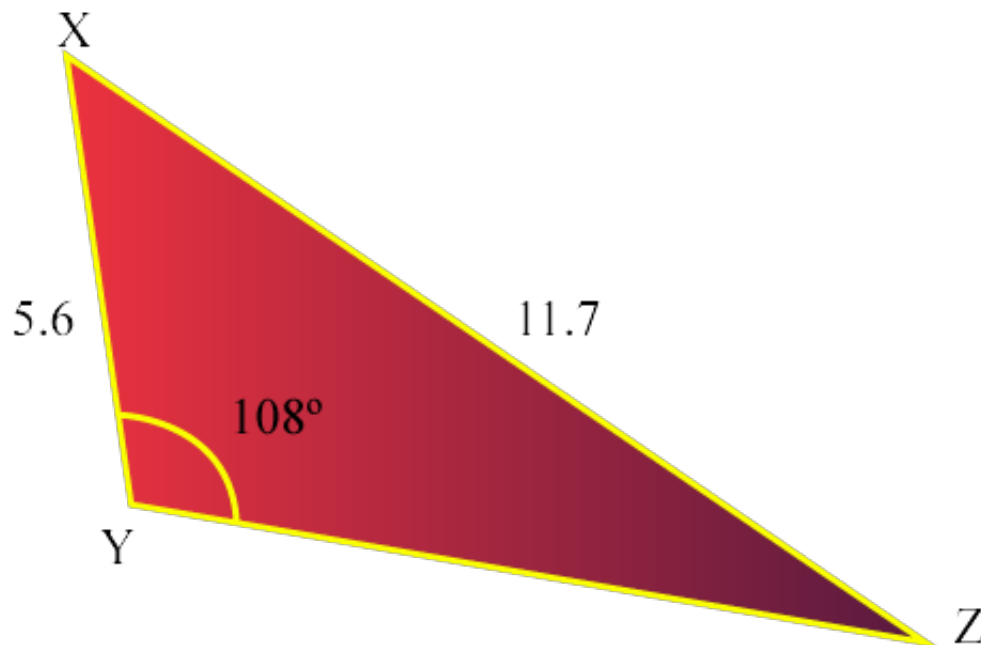
- 4
- 2
- 5
- 8



3) If $\sin x + \cos x = \sqrt{2} \sin(90^\circ - x)$ determine $\cot x$

- $\sqrt{2} + 2$
- $\sqrt{2} + 1$
- $\sqrt{2} - 2$
- $\sqrt{2}$

4) What is the size of Angle X?



- 44.9°
- 54.9°
- 64.9°
- 47.9°

5) If $\sin x = \frac{3}{5}$, find the values of $\tan x$

- $\frac{3}{4}$
- $\frac{7}{3}$
- $\frac{2}{3}$
- $\frac{4}{3}$



6) If $\cos x = 1/2$, find the value of $(2 \sec x / 1 + \tan^2 x)$

- 3
- 1
- 8
- 4

7) Evaluate $\tan 35^\circ \times \tan 60^\circ \times \tan 55^\circ \times \tan 30^\circ$

- 7
- 1
- 2
- 4

8) If $\operatorname{cosec} A = \sec 25^\circ$ find A

- 66°
- 65°
- 45°
- 35°

9) If $\sin A = \cos 33^\circ$, find A

- 52°
- 55°
- 57°
- 56°

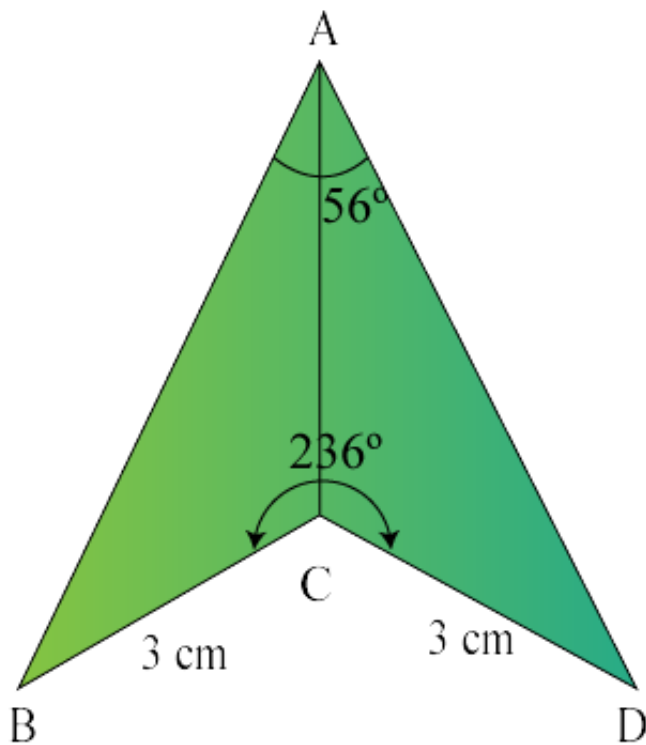
10) Find the value of θ ($0^\circ < \theta < 90^\circ$), when $\sin^2 \theta - 3 \sin \theta + 2 = 0$

- 30°



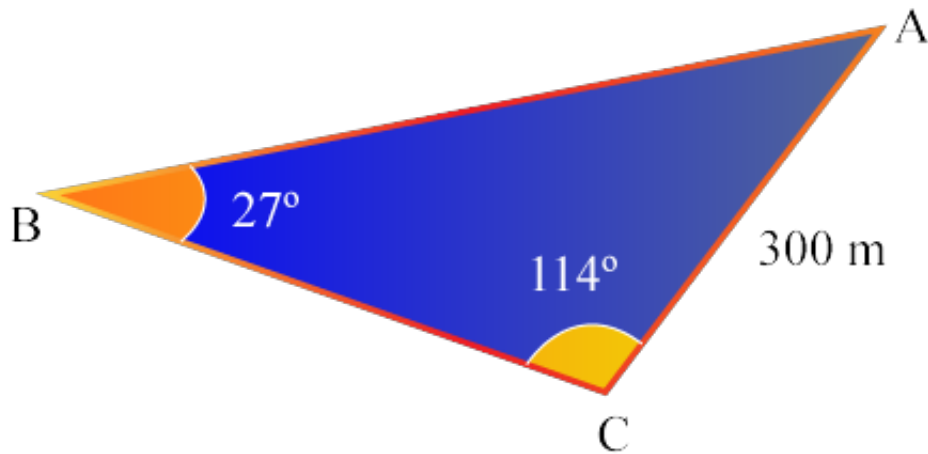
- 55
- 90
- 0

11) The diagram shows an arrowhead (re-entrant kite). Calculate the length of the side AB.



- 9.64 cm
- 6.64 cm
- 5.84 cm
- 5.64 cm

12) Farmer Jones has a triangular field ABC as shown in the following diagram: He wants to fence the field. Fencing is sold by the meter. How many meters of fencing does he need to purchase?



- 1,319.6 m
- 4,319.6 m
- 2,319.6 m
- 3,319.6 m

13) If $3 \tan \theta = 4$, evaluate $(3 \sin \theta + 2 \cos \theta) / (3 \sin \theta - 2 \cos \theta)$

- 6
- 9
- 3
- 5

14) Express $1 + 2 \sin A \cos A$ as a perfect square.

- $(\cos A + \sin A)^2$
- $(\sin A - \cos A)^2$
- $(\sin A + \cos A)^2$
- $(\cos A - \sin A)^2$

15) When A and B be acute angles, $\sin A = 0.3$ and $\cos B = 0.7$ it is

- None of these
- Possible
- Data inadequate
- Impossible



16) If $0^\circ < A < 90^\circ$ can $\sin A = 0.4$ and $\cos A = 0.5$ be

- Possible
- Impossible
- Data inadequate
- None of these

17) Express in radians as well as in grades the fourth angle of a quadrilateral, which has three angles $46^\circ 30' 10''$, $75^\circ 44' 45''$, $123^\circ 9' 35''$ respectively.

- 7
- 9
- 5
- 2

18) Convert the angle into centesimal system, $(13751 / 120)^\circ$

- $157^g 32' 41''$
- $127^g 32' 41''$
- $117^g 12' 41''$
- $147^g 52' 41''$

19) Find the angle in radian through a pendulum swings if its length is 75cm and the tip describes an arc of length 10 cm

- $9/15$
- $4/15$
- $2/15$
- $6/15$



20) Find the angle in radian through a pendulum swings if its length is 75cm and the tip describes an arc of length 15cm.

- $2/5$
- $1/5$
- $4/5$
- $3/5$

21) Find the angle in radian through a pendulum swings if its length is 75cm and the tip describes an arc of length 21cm

- $8/25$
- $6/25$
- $7/25$
- $8/15$

22) If G, D, denote respectively, the number of grades, degrees and radians in an angle then $G/100 = D/90 = ?$

- 54
- 21
- 76
- 45

23) If G, D, denote respectively, the number of grades, degrees and radians in an angle then $G - D = ?$

- 201
- 346
- 350
- 654

24) Large hand of a clock is 21cm long. How much distance does its extremity move in 20 minutes?



- 67
- 46
- 88
- 96

25) Find the angle between the minute hand and hour hand of a clock when the time is 7.20?

- 800°
- 100°
- 500°
- 700°

26) If $\tan = -2$, find the values of the trigonometric ratios?

- $3/2$
- $1/2$
- $-3/2$
- $-1/2$

27) Which of the following statement is correct for $\sin = x + 1/x$ is

- Not possible for real x
- Not possible for imaginary x
- Possible for imaginary x
- Possible for real x

28) Whether the equation $2 \sin^2 - \cos + 4 = 0$ is

- Not possible
- None of these
- Can't determine
- Possible



29) Solve for a and c in the given triangle. Also find the area of the ABC.

- 183
- 783
- 283
- 683

30) If A, B, A + B, A - B are positive acute angles, find the values of A and B from the equations: $\sin (A - B) = 1/2$, $\cos (A + B) = 1/2$

- (60, 15)
- (30, 25)
- (45, 15)
- (25, 10)