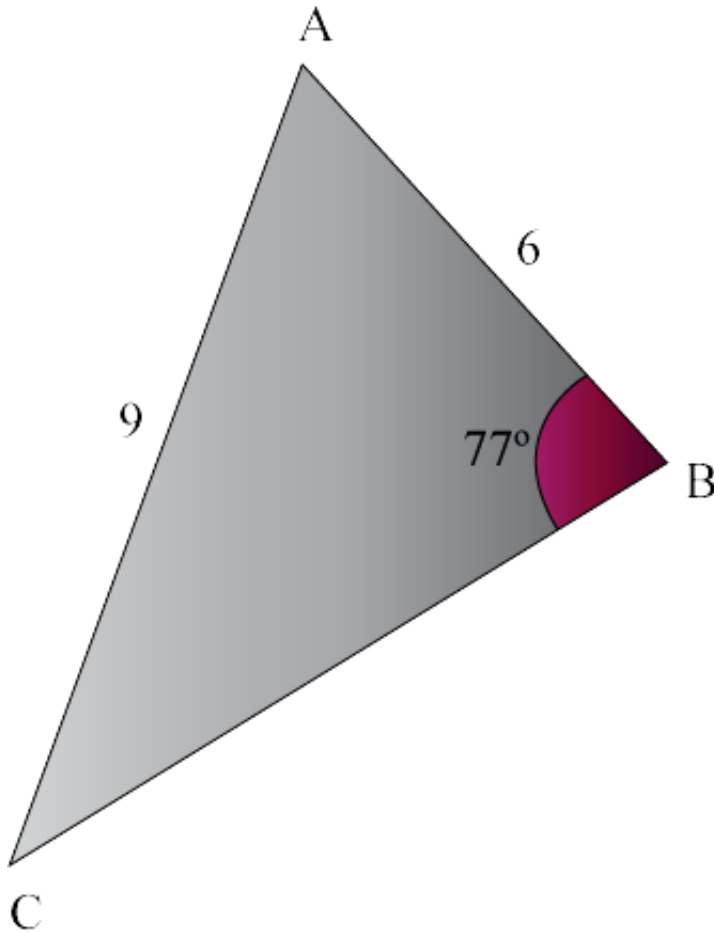




Eleventh Grade - Trigonometry

1) What is the size of Angle C?



- 10.5°
- 80.5°
- 20.5°
- 40.5°

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

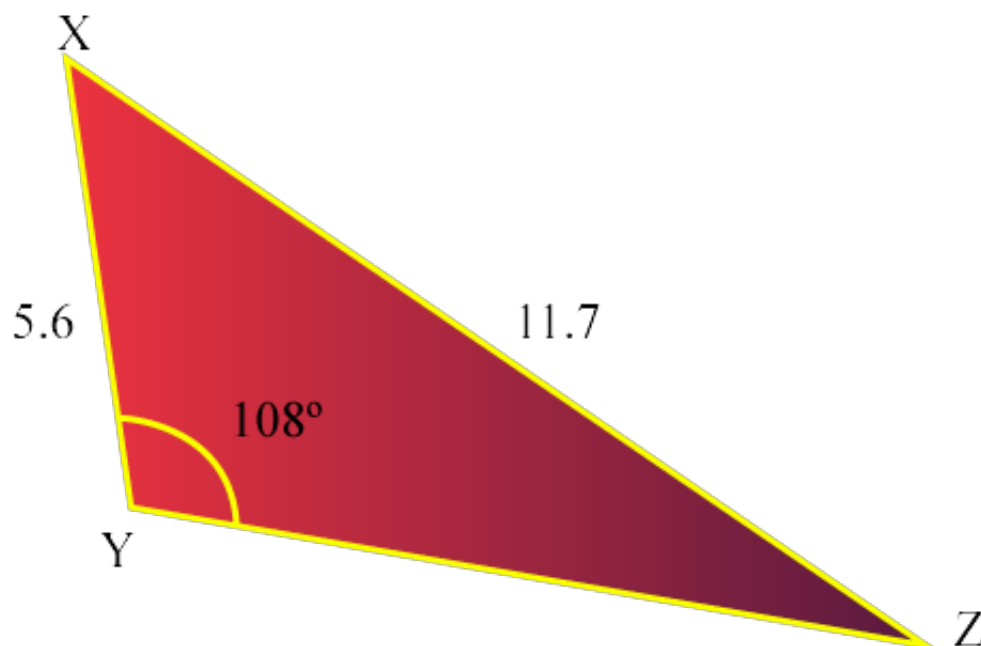
- 4
- 8
- 5
- 2



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

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

4) What is the size of Angle X?



- 44.9°
- 47.9°
- 64.9°
- 54.9°

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

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



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

- 4
- 1
- 3
- 8

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

- 7
- 2
- 4
- 1

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

- 35
- 65
- 66
- 45

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

- 57
- 52
- 55
- 56

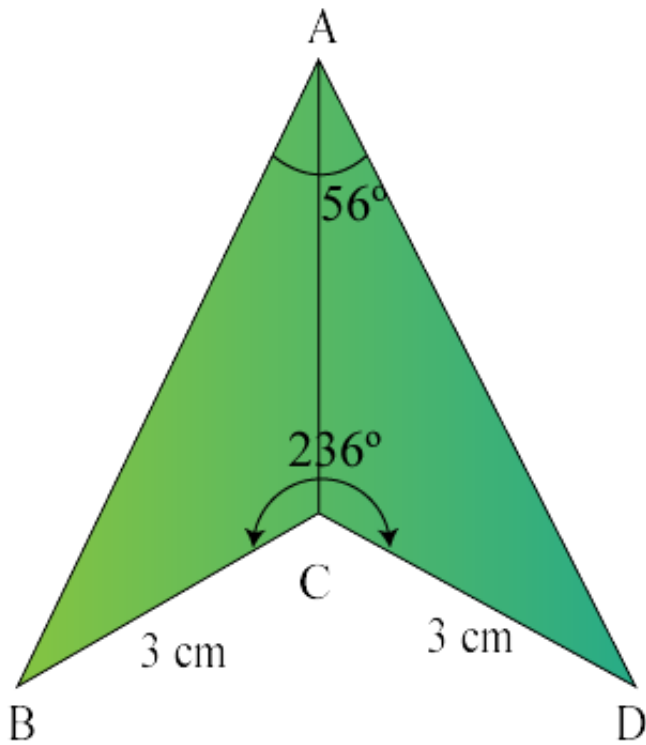
10) Find the value of θ ($0^\circ < \theta < 90^\circ$), when $\sin^2 \theta - 3 \sin \theta + 2 = 0$

- 30



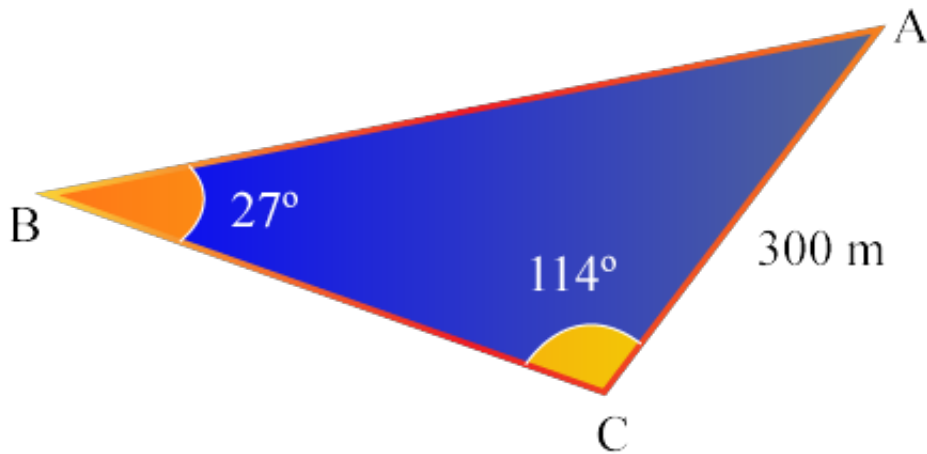
- 0
- 55
- 90

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



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



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

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

- 5
- 9
- 3
- 6

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

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

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

- Possible
- Impossible
- None of these
- Data inadequate



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

- None of these
- Possible
- Impossible
- Data inadequate

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.

- 2
- 5
- 9
- 7

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

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

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

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



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

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

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

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

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

- 21
- 45
- 54
- 76

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

- 201
- 350
- 654
- 346

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



- 67
- 96
- 88
- 46

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

- 700?
- 800?
- 100?
- 500?

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

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

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

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

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

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



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

- 783
- 183
- 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)
- (45, 15)
- (30, 25)
- (25, 10)