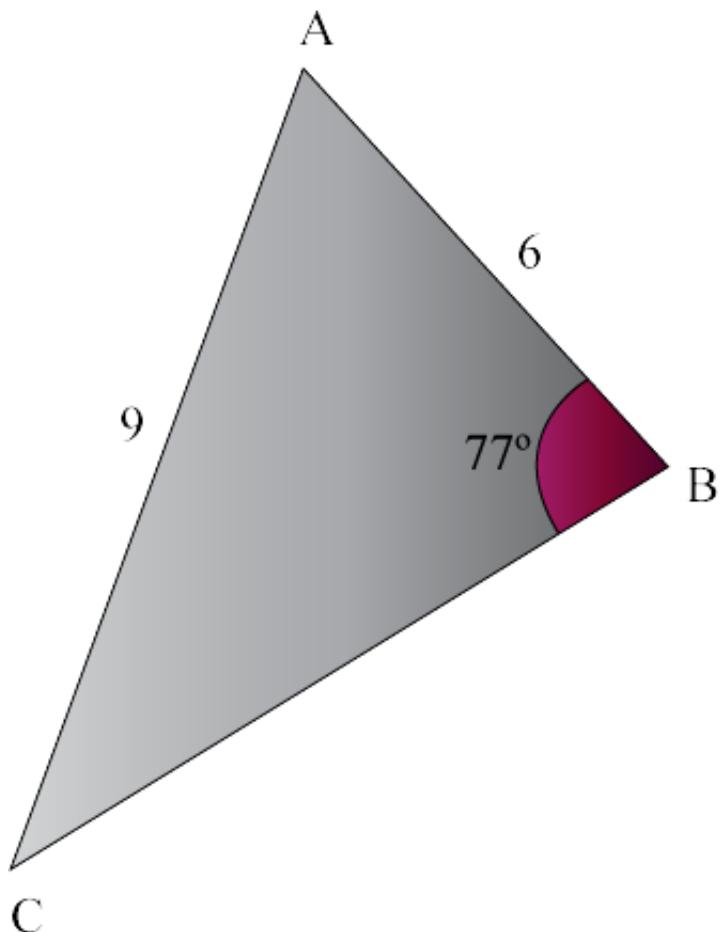


**Eleventh Grade - Trigonometry**

1) What is the size of Angle C?



- $40.5^\circ$
- $80.5^\circ$
- $20.5^\circ$
- $10.5^\circ$

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

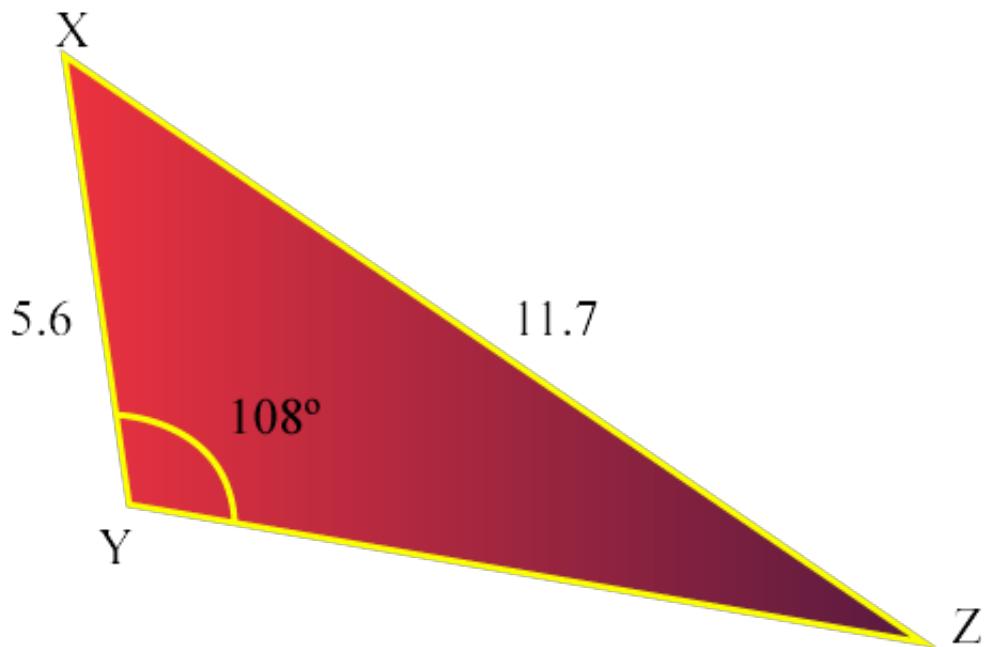
- 4
- 8
- 2
- 5



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

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

4) What is the size of Angle X?



- $54.9^\circ$
- $44.9^\circ$
- $64.9^\circ$
- $47.9^\circ$

5) If  $\sin x = 3/5$ , find the values of  $\tan x$

- $7/3$
- $2/3$
- $4/3$
- $3/4$



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

- 8
- 4
- 3
- 1

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

- 7
- 4
- 1
- 2

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

- 65
- 35
- 66
- 45

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

- 56
- 57
- 55
- 52

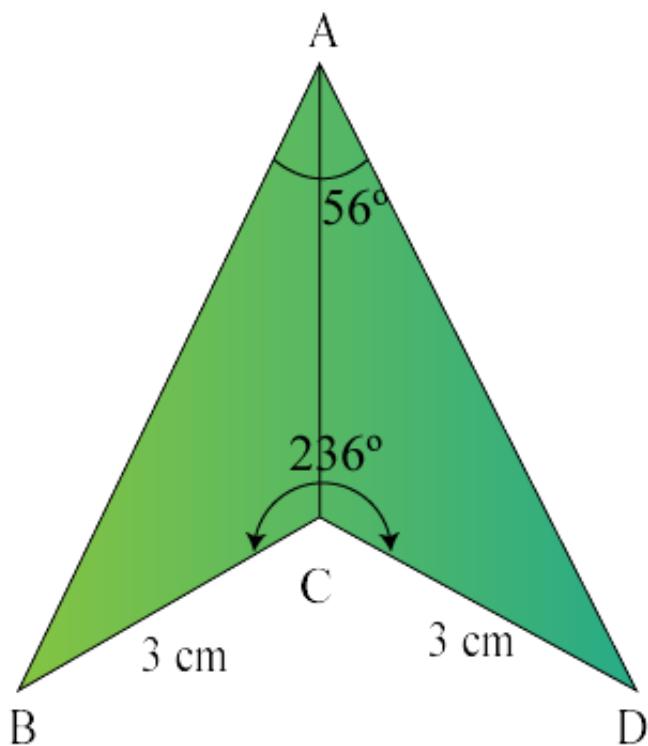
10) Find the value of ? ( $0^\circ ? ? ? 90^\circ$ ), when  $\sin^2 ? - 3 \sin ? + 2 = 0$

- 0



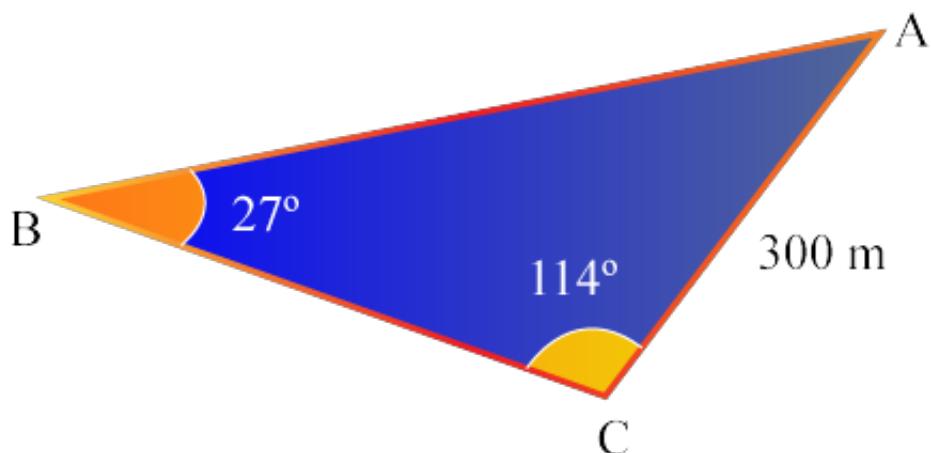
- 55
- 90
- 30

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



- 9.64 cm
- 5.64 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?



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

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

- 6
- 9
- 5
- 3

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

- Possible
- Data inadequate
- Impossible
- None of these



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

- Data inadequate
- Possible
- Impossible
- 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.

- 2
- 7
- 5
- 9

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

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

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

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



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

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

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

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

- 76
- 54
- 21
- 45

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

- 201
- 350
- 346
- 654

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



- 96
- 46
- 67
- 88

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

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

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

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

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

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

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

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



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

- 183
- 283
- 683
- 783

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

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