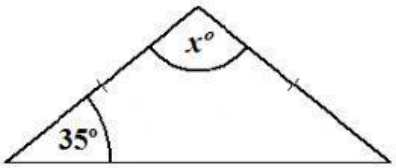
GEOMETRY AND TRIGONOMETRY

Please attempt the following questions – it is a paper and pencil test. Work out your answers. Then, click on the answer of your choice.

1.



In the isosceles triangle shown above, the value of x is

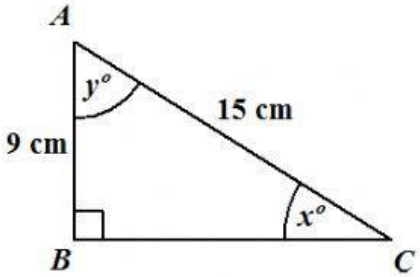
(A) 35

(B) 70

(C) 110

(D) 145

2.



In the right-angled triangle above, $\frac{9}{15} =$

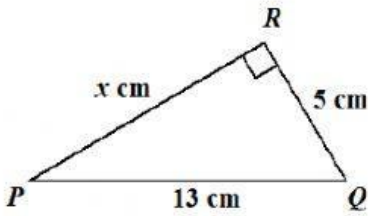
(A) $\sin y$

(B) $\cos x$

(C) $\tan y$

(D) $\cos y$

3.



In the triangle PQR, not drawn to scale, PQ is 13 cm, RQ is 5 cm, PR is x cm and angle PRQ is 90°. The value of x is

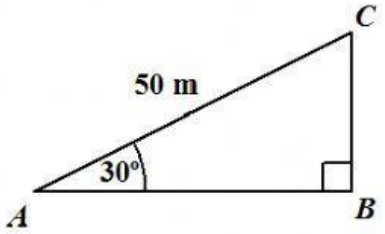
(A) $\sqrt{18}$

(B) 8

(C) 12

(D) 18

4.



In the triangle above, not drawn to scale, the angle $CAB = 30°$ and $AC = 50\ m$. The length of BC, in metres, is

(A) $50 \sin 30°$

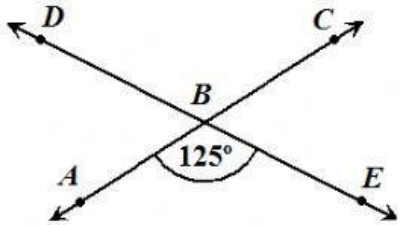
(B) $50 \cos 30°$

(C) $50 \tan 30°$

D) $50 \sin 60°$

LIVEWORKSHEETS

5.



In the diagram above, not drawn to scale, AC and DE are straight lines intersecting at B. Angle $ABE = 125°$. The measure of angle CBD is

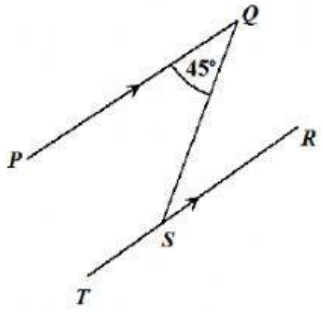
(A) 55°

(B) 125°

(C) 235°

(D) 305°

6.



In the diagram above, not drawn to scale, PQ is parallel to TR and angle PQS is 45°. The measure of angle QST is

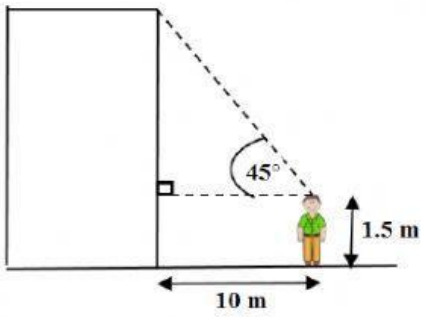
(A) 40°

(B) 45°

(C) 135°

(D) 145°

7.



A boy of height 1.5 metres stands 10 metres from the foot of a building and the angle of elevation of the top of the building is 45°. The height of the building, in metres, is

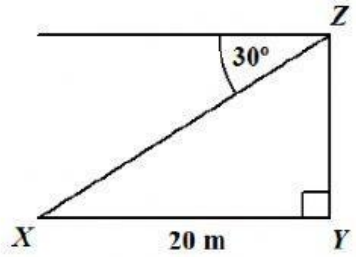
(A) $11.5 \tan 45°$

(B) $1.5 + 10 \sin 45°$

(C) $1.5 + 10 \tan 45°$

(D) $1.5 + 10 \cos 45°$

8.



The diagram above, not drawn to scale, shows that the angle of depression of a point X from Z is 30°. If X is 20 metres from Y, the height of YZ, in metres, is

(A) $20\ sin30°$

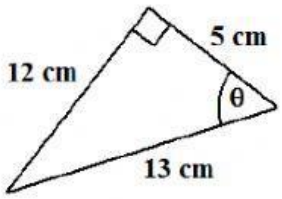
(B) $20\ tan30°$

(C) $20\ cos30°$

(D) $20\ sin60°$

LIVEWORKSHEETS

9.



In the right-angled triangle above, $\tan\theta$, is

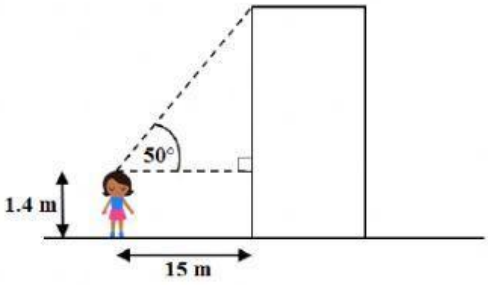
(A) $\frac{5}{12}$

(B) $\frac{5}{13}$

(C) $\frac{12}{13}$

(D) $\frac{12}{5}$

10.



A girl of height 1.4 metres stands 15 metres from the foot of a building and the angle of elevation of the top of the building is 50°. The height of the building, in metres, is

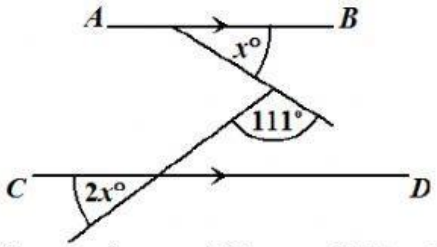
(A) $16.4\tan 50°$

(B) $1.4 + 15\sin 50°$

(C) $1.4 + 15\tan 50°$

(D) $1.4 + 15\cos 50°$

11.



In the figure above, AB is parallel to CD. Find the value of x.

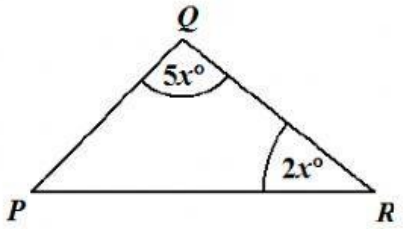
(A) 69

(B) 34.5

(C) 23

D) 11.5

12.



In a triangle PQR, angle $Q = 5x°$ and angle $R = 2x°$. What is the size of angle P?

(A) 36°

(B) 40°

(C) $\left(\frac{180}{7x}\right)^{\circ}$

(D) $(180 - 7x)^{\circ}$

LIVEWORKSHEETS