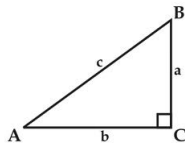


Math worksheet: Trigonometry 2

Name: _____

Score: _____

1. In the triangle $\triangle ABC$, $\angle C = 90^\circ$, complete the following table with given data



a	b	c	A	sin A	cos A	tan A
2	2					
3		6				
		10			$\frac{1}{2}$	
3		5				
		13				$\frac{12}{13}$

2. In $RT \triangle ABC$, $\angle C = 90^\circ$.

(1) if $\sin B = \frac{3}{5}$, then $\frac{BC}{AB} = \underline{\hspace{2cm}}$

(2) if $AC = 3BC$, then $\sin A = \underline{\hspace{2cm}}$

(3) if $\sin A = \frac{3}{5}$, then $\cos B = \underline{\hspace{2cm}}$

(4) if $\sin A = \frac{4}{5}$, $AB = 15$, then $\tan A = \underline{\hspace{2cm}}$, $AC = \underline{\hspace{2cm}}$

3. Calculation without using calculator

(1) $2 \cos 30^\circ - \tan 60^\circ$

(2) $\frac{1 - \cos 60^\circ}{\sin 60^\circ} \cdot \tan 50^\circ$

(3) $\sqrt{2}(2 \cos 45^\circ - \sin 60^\circ) + \frac{\sqrt{24}}{4}$

(4) $\sqrt{2} \sin 45^\circ + \cos 30^\circ \cdot \tan 60^\circ - \sqrt{(-3)^2}$

4. $\triangle ABC$ is an isosceles triangle with base $BC = 2\sqrt{6}$ and $\angle B = \angle C = 30^\circ$. Calculate the length of AB and the area of this triangle.

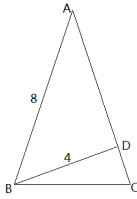


Figure 1: question 5

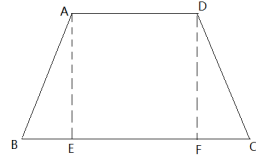


Figure 2: question 6

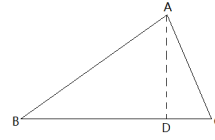


Figure 3: question 7

5. As in the graph, $\triangle ABC$ is an isosceles triangle, $BD \perp AC$. If $AB=8$ and $BD=4$, get the sizes of all the three angles of $\triangle ABC$.

6. $ABCD$ is an isosceles trapezium, the base $BC = 4$ and the height $AD = 2$, if $\sin B = \frac{4}{5}$, calculate the length of AD

7. In $\triangle ABC$, $BC = 14$, $AB = 15$ and the area of $\triangle ABC$ equals to 84. Calculate the size of AC .