

Mathematics Worksheet Grade 9

Unit: Trigonometry

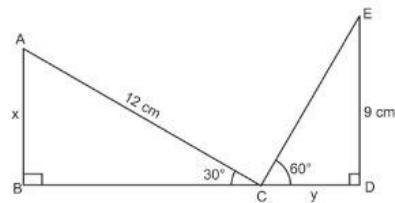
Q1 Evaluate the expression

$$\frac{\cot 38^\circ}{\tan 52^\circ} + \frac{\sec 25^\circ}{\operatorname{cosec} 65^\circ} - \frac{3 \tan 35^\circ}{\cot 55^\circ}$$

Q2 Find the value of θ when,

$$(\tan^2 \theta - 3)(2 \sin 3\theta - 1) = 0$$

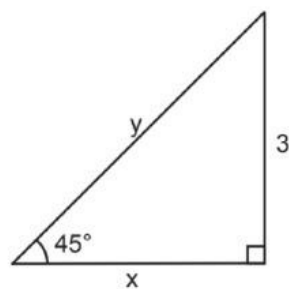
Q3 Find the value of x and y :



Q4 Find the value of

$$\cos \theta \sin (90^\circ - \theta) + \sin \theta \cos (90^\circ - \theta)$$

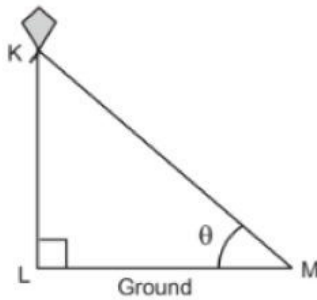
Q5 Find the value of x and y



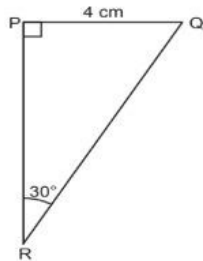
Q6 Find the value of θ when,
$$\sin (2\theta - 10^\circ) = \cos (\theta + 40^\circ)$$

Q7 Evaluate without using trigonometric tables
$$4 \tan 28^\circ \tan 62^\circ - \cot^2 30^\circ$$

Q8 A boy is flying a kite at a height of 40 m from the ground, attached to a string inclined at 30° to the horizontal. Find the length of the string.



Q9 Find the measure of QR



Q10 Find the value of
$$\frac{\tan (90^\circ - \theta) \cos (90^\circ - \theta)}{\sin (90^\circ - \theta)}$$