

# Trigonometric identities

 Guided Notes

1. Which of these trigonometric identities is correct?

a.  $\sin(\theta) \cot(\theta) = \tan(\theta)$    b.  $\tan(\theta) \cot(\theta) = \cos(\theta)$    c.  $\sin(\theta) \cot(\theta) = \cos(\theta)$

2. Which of these trigonometric identities is correct?

a.  $\tan(\theta) \cot(\theta) = 1$    b.  $\operatorname{cosec}(\theta) \cot(\theta) = \cos(\theta)$    c.  $\sec(\theta) \operatorname{cosec}(\theta) = 1$

3. Which of these is not a reciprocal identity?

a.  $\frac{1}{\sin(\theta)} = \operatorname{cosec}(\theta)$    b.  $\frac{1}{\cot(\theta)} = \sec(\theta)$    c.  $\cot(\theta) = \frac{1}{\tan(\theta)}$

4. What will be the value of  $\sin(\theta)$  if  $\cot(\theta) = \frac{1}{\sqrt{3}}$  and  $\cos(\theta) = \frac{1}{2}$ ?

$$\text{Since, } \cot(\theta) = \frac{\cos(\theta)}{\sin(\theta)}$$

$$\text{so } \frac{1}{\sqrt{3}} = \frac{\frac{1}{2}}{\sin(\theta)}$$

$$\text{or } \sin(\theta) = \frac{\sqrt{3}}{2}$$