

1. Use identities to find each exact value.

a) $\sin(-75^\circ)$

b) $\cos \frac{17\pi}{12}$

2. Write the following as a function of θ and simplify.

$\sin(180^\circ - \theta)$

3. Find $\sin(s + t)$ if $\sin s = \frac{4}{5}$ and $\cos t = -\frac{5}{13}$ and $\frac{\pi}{2} < s < \pi$ and $\pi < t < \frac{3\pi}{2}$. Also, which quadrant is $s + t$ in?

4. Verify the following identity.

$$\sin(x + y) + \sin(x - y) = 2 \sin x \cos y$$

Q: What has four wheels and flies?