

ANSWERS

1a

1b

2a

2b

3a

3b

4a

4b

5a

5b

Find the other three trigonometric functions if:

1. a. $\sin \theta = -\frac{8}{17}$ and $\pi < \theta < \frac{3\pi}{2}$

b. $\cos \theta = -\frac{5}{13}$ and $\frac{\pi}{2} < \theta < \pi$

2. a. If $\sin \theta = \frac{15}{17}$ and $\frac{\pi}{2} < \theta < \pi$ then find $\sin \frac{\theta}{2}$ and $\operatorname{tg} \frac{\theta}{2}$?

b. If $\sin \theta = \frac{5}{13}$ and $\frac{\pi}{2} < \theta < \pi$ then find $\cos \frac{\theta}{2}$ and $\operatorname{ctg} \frac{\theta}{2}$?

3. a. If $\cos \theta = \frac{5}{13}$ and $\frac{\pi}{4} < \theta < \frac{\pi}{2}$ then find $\cos 2\theta$ and $\operatorname{ctg} 2\theta$?

b. If $\sin \theta = \frac{3}{5}$ and $0 < \theta < \frac{\pi}{4}$ then find $\cos 2\theta$ and $\operatorname{ctg} 2\theta$?

4. a. If $\cos \theta = \frac{4}{5}$ and $0 < \theta < \frac{\pi}{2}$ then find $\operatorname{ctg} \theta$?

b. If $\sin \theta = \frac{5}{13}$ and $\frac{\pi}{2} < \theta < \pi$ then find $\operatorname{tg} \theta$?

5. a. If $\operatorname{tg} \theta = \frac{1}{3}$ then find $\operatorname{tg} 2\theta$?

b. If $\operatorname{ctg} \frac{\theta}{2} = 2$ then find $\operatorname{ctg} \theta$?

A