



Precalculus: Trigonometric Functions

Name _____ Date _____

Calculate the sine of an angle given the cosine and the quadrant or vice-versa

(1) $\cos \theta = \frac{28}{53}, \theta \in \text{I}$

(2) $\cos \theta = \frac{77}{85}, \theta \in \text{I}$

(3) $\cos \theta = -\frac{13}{85}, \theta \in \text{III}$

(4) $\cos \theta = \frac{3}{5}, \theta \in \text{I}$

(5) $\cos \theta = -\frac{28}{53}, \theta \in \text{II}$

(6) $\cos \theta = -\frac{12}{13}, \theta \in \text{III}$

(7) $\sin \theta = -\frac{4}{5}, \theta \in \text{IV}$

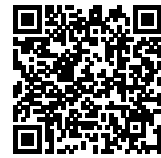
(8) $\cos \theta = \frac{9}{41}, \theta \in \text{I}$

(9) $\sin \theta = -\frac{15}{17}, \theta \in \text{IV}$

(10) $\sin \theta = \frac{80}{89}, \theta \in \text{II}$

(11) $\sin \theta = -\frac{20}{29}, \theta \in \text{IV}$

(12) $\sin \theta = -\frac{144}{145}, \theta \in \text{IV}$



Answers

Calculate the sine of an angle given the cosine and the quadrant or vice-versa

$$(1) \quad \cos \theta = \frac{28}{53}, \theta \in I$$

$$\sin \theta = \frac{45}{53}$$

$$(3) \quad \cos \theta = -\frac{13}{85}, \theta \in III$$

$$\sin \theta = -\frac{84}{85}$$

$$(5) \quad \cos \theta = -\frac{28}{53}, \theta \in II$$

$$\sin \theta = \frac{45}{53}$$

$$(7) \quad \sin \theta = -\frac{4}{5}, \theta \in IV$$

$$\cos \theta = \frac{3}{5}$$

$$(9) \quad \sin \theta = -\frac{15}{17}, \theta \in IV$$

$$\cos \theta = \frac{8}{17}$$

$$(11) \quad \sin \theta = -\frac{20}{29}, \theta \in IV$$

$$\cos \theta = \frac{21}{29}$$

$$(2) \quad \cos \theta = \frac{77}{85}, \theta \in I$$

$$\sin \theta = \frac{36}{85}$$

$$(4) \quad \cos \theta = \frac{3}{5}, \theta \in I$$

$$\sin \theta = \frac{4}{5}$$

$$(6) \quad \cos \theta = -\frac{12}{13}, \theta \in III$$

$$\sin \theta = -\frac{5}{13}$$

$$(8) \quad \cos \theta = \frac{9}{41}, \theta \in I$$

$$\sin \theta = \frac{40}{41}$$

$$(10) \quad \sin \theta = \frac{80}{89}, \theta \in II$$

$$\cos \theta = -\frac{39}{89}$$

$$(12) \quad \sin \theta = -\frac{144}{145}, \theta \in IV$$

$$\cos \theta = \frac{17}{145}$$