

Algebra 3 Assignment # 3

(1) $\sin(\theta) = \frac{4}{5}$, $0 < \theta < \frac{\pi}{2}$. Find the remaining 5 trig. functions of θ .

(2) $\cos(\theta) = -\frac{5}{13}$, $\frac{\pi}{2} < \theta < \pi$. Find the remaining 5 trig. functions of θ .

(3) $\tan(\theta) = \frac{2}{5}$, $180^\circ < \theta < 270^\circ$. Find the remaining 5 trig. functions of θ .

(4) $\sec(\theta) = \frac{7}{3}$, $\frac{3\pi}{2} < \theta < 2\pi$. Find the remaining 5 trig. functions of θ .

(5) $\csc(\theta) = -\frac{5}{3}$, $\pi < \theta < \frac{3\pi}{2}$. Find the remaining 5 trig. functions of θ .

(6) $\cot(\theta) = -3$, $-\frac{\pi}{2} < \theta < 0$. Find the remaining 5 trig. functions of θ .

(7) Find the values of the six trig. functions of θ , if θ is an angle in standard position with the point $(-5, 12)$ on its terminal ray.

(8) Find the values of the six trig. functions of θ , if θ is an angle in standard position with the point $(0, -5)$ on its terminal ray.

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Answers

$$(1) \cos(\theta) = \frac{3}{5}, \tan(\theta) = \frac{4}{3}, \cot(\theta) = \frac{3}{4}, \sec(\theta) = \frac{5}{3}, \csc(\theta) = \frac{5}{4}$$

$$(2) \sin(\theta) = \frac{12}{13}, \tan(\theta) = -\frac{12}{5}, \cot(\theta) = -\frac{5}{12}, \sec(\theta) = -\frac{13}{5}, \csc(\theta) = \frac{13}{12}$$

$$(3) \sin(\theta) = -\frac{2}{\sqrt{29}}, \cos(\theta) = -\frac{5}{\sqrt{29}}, \cot(\theta) = \frac{5}{2}, \sec(\theta) = -\frac{\sqrt{29}}{5}, \csc(\theta) = -\frac{\sqrt{29}}{2}$$

$$(4) \sin(\theta) = -\frac{2\sqrt{10}}{7}, \cos(\theta) = \frac{3}{7}, \tan(\theta) = -\frac{2\sqrt{7}}{3}, \cot(\theta) = -\frac{3}{2\sqrt{7}}, \csc(\theta) = -\frac{7}{2\sqrt{10}}$$

$$(5) \sin(\theta) = -\frac{3}{5}, \cos(\theta) = -\frac{4}{5}, \tan(\theta) = \frac{3}{4}, \cot(\theta) = \frac{4}{3}, \sec(\theta) = -\frac{5}{4}$$

$$(6) \sin(\theta) = -\frac{1}{\sqrt{10}}, \cos(\theta) = \frac{3}{\sqrt{10}}, \tan(\theta) = -\frac{1}{3}, \sec(\theta) = \frac{\sqrt{10}}{3}, \csc(\theta) = -\sqrt{10}$$

$$(7) \sin(\theta) = \frac{12}{13}, \cos(\theta) = -\frac{5}{13}, \tan(\theta) = -\frac{12}{5}, \cot(\theta) = -\frac{5}{12}, \sec(\theta) = -\frac{13}{5}, \csc(\theta) = \frac{13}{12}$$

$$(8) \sin(\theta) = -1, \cos(\theta) = 0, \tan(\theta) \text{ is undefined}, \cot(\theta) = 0, \sec(\theta) \text{ is undefined}, \\ \csc(\theta) = -1$$