

Algebra 3 Review Worksheet

(1) Find each of the following numbers please.

(a) $\sin\left(\frac{2\pi}{3}\right)$

(f) $\csc(-150^\circ)$

(k) $\sec\left(\frac{4\pi}{3}\right)$

(b) $\cos(135^\circ)$

(g) $\sin\left(\frac{7\pi}{6}\right)$

(l) $\csc\left(-\frac{\pi}{4}\right)$

(c) $\tan\left(\frac{3\pi}{2}\right)$

(h) $\cos(600^\circ)$

(m) $\sin(0)$

(d) $\cot(330^\circ)$

(i) $\tan\left(-\frac{25\pi}{6}\right)$

(n) $\cos(\pi)$

(e) $\sec(-3\pi)$

(j) $\cot(-405^\circ)$

(o) $\cot(180^\circ)$

(2) $\sin(x) = \frac{5}{7}$, $\frac{\pi}{2} < x < \pi$. Find the remaining 5 trig functions of x.

(3) $\tan(\theta) = \frac{1}{2}$, $0^\circ < \theta < 90^\circ$. Find the remaining 5 trig functions of θ .

(4) $\cot(x) = 0.8$, $\pi < x < \frac{3\pi}{2}$. Find the remaining 5 trig functions of x.

(5) $\sec(\theta) = -3$, $90^\circ < \theta < 180^\circ$. Find the remaining 5 trig functions of θ .

(6) Find the values of the six trig. functions of θ , if θ is an angle in standard position with the point $(-5, 3)$ on its terminal ray.

(7) Determine whether each of the following functions is odd, even, or neither.

(a) $f(x) = x^2 + \cos(x)$

(c) $f(x) = x \sin(4x)$

(b) $f(x) = \tan(x) \sec(x)$

(d) $f(x) = x^2 - \csc(x)$

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Answers

(1) (a) $\frac{\sqrt{3}}{2}$

(f) -2

(k) -2

(b) $-\frac{\sqrt{2}}{2}$

(g) $-\frac{1}{2}$

(l) $-\sqrt{2}$

(c) undefined

(h) $-\frac{1}{2}$

(m) 0

(d) $-\sqrt{3}$

(i) $-\frac{1}{\sqrt{3}}$

(n) -1

(e) -1

(j) -1

(o) undefined

(2) $\cos(x) = -\frac{2\sqrt{6}}{7}$, $\tan(x) = -\frac{5}{2\sqrt{6}}$, $\cot(x) = -\frac{2\sqrt{6}}{5}$, $\sec(x) = -\frac{7}{2\sqrt{6}}$, $\csc(x) = \frac{7}{5}$

(3) $\sin(\theta) = \frac{1}{\sqrt{5}}$, $\cos(\theta) = \frac{2}{\sqrt{5}}$, $\cot(\theta) = 2$, $\sec(\theta) = \frac{\sqrt{5}}{2}$, $\csc(\theta) = \sqrt{5}$

(4) $\sin(x) = -\frac{5}{\sqrt{41}}$, $\cos(x) = -\frac{4}{\sqrt{41}}$, $\tan(x) = \frac{5}{4}$, $\sec(x) = -\frac{\sqrt{41}}{4}$, $\csc(x) = -\frac{\sqrt{41}}{5}$

(5) $\sin(\theta) = \frac{2\sqrt{2}}{3}$, $\cos(\theta) = -\frac{1}{3}$, $\tan(\theta) = -2\sqrt{2}$, $\cot(\theta) = -\frac{1}{2\sqrt{2}}$, $\csc(\theta) = \frac{3}{2\sqrt{2}}$

(6) $\sin(\theta) = \frac{3}{\sqrt{34}}$, $\cos(\theta) = -\frac{5}{\sqrt{34}}$, $\tan(\theta) = -\frac{3}{5}$, $\cot(\theta) = -\frac{5}{3}$, $\sec(\theta) = -\frac{\sqrt{34}}{5}$, $\csc(\theta) = \frac{\sqrt{34}}{3}$

(7) (a) Even

(c) Even

(b) Odd

(d) Neither