

Algebra 3 Review Worksheet Assignment # 17

(1) Sketch a graph of each of the following showing at least one period please.

(a) $y = 4 \sin(3x + \pi)$

(g) $y = -2 \sin(3x)$

(b) $y = 2 \cos\left(\frac{1}{2}x - \frac{\pi}{2}\right)$

(h) $y = \cos\left(\frac{2}{3}x\right) - 1$

(c) $y = -\tan\left(\frac{1}{2}x - \frac{3\pi}{2}\right)$

(i) $y = 2 \tan(3x + \pi)$

(d) $y = 2 \cot\left(3x + \frac{\pi}{2}\right)$

(j) $y = \cot(x - \pi)$

(e) $y = 2 \sec(2x - \pi)$

(k) $y = 3 \sec\left(5x + \frac{\pi}{2}\right)$

(f) $y = 3 \csc\left(4x + \frac{\pi}{2}\right)$

(l) $y = -\csc\left(\frac{1}{3}x + \pi\right) + 1$

(2) Find each of the following numbers please.

(a) $\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)$

(i) $\cos\left(\frac{1}{2} \tan^{-1}\left(-\frac{12}{5}\right)\right)$

(b) $\cos^{-1}(-1)$

(j) $\sin\left(\frac{1}{2} \tan^{-1}\left(-\frac{12}{5}\right)\right)$

(c) $\tan^{-1}\left(-\frac{1}{\sqrt{3}}\right)$

(k) $\sin\left(\pi + \sin^{-1}\left(\frac{1}{3}\right)\right)$

(d) $\sec^{-1}(-2)$

(l) $\cos\left(\frac{3\pi}{2} + \tan^{-1}(-3)\right)$

(e) $\cot^{-1}(-1)$

(m) $\sin\left(\sin^{-1}\left(\frac{2}{3}\right) - \cos^{-1}\left(\frac{2}{3}\right)\right)$

(f) $\csc^{-1}(-\sqrt{2})$

(n) $\cos\left(\tan^{-1}(0) + \pi\right)$

(g) $\sin\left(\cos^{-1}\left(\frac{3}{7}\right)\right)$

(o) $\tan\left(\sec^{-1}\left(-\frac{7}{5}\right)\right)$

(h) $\sin\left(2 \cos^{-1}\left(\frac{3}{7}\right)\right)$

(p) $\sin^{-1}(2)$

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Answers

(2) (a) $-\frac{\pi}{3}$

(b) π

(c) $-\frac{\pi}{6}$

(d) $\frac{2\pi}{3}$

(e) $\frac{3\pi}{4}$

(f) $-\frac{\pi}{4}$

(g) $\frac{2\sqrt{10}}{7}$

(h) $\frac{12\sqrt{10}}{49}$

(i) $\frac{3}{\sqrt{13}}$

(j) $-\frac{2}{\sqrt{13}}$

(k) $-\frac{1}{3}$

(l) $-\frac{3}{\sqrt{10}}$

(m) $-\frac{1}{9}$

(n) -1

(o) $-\frac{2\sqrt{6}}{7}$

(p) ϕ