Algebra III
Chapter 8
REVIEW

Name KEY

Date

Solve each of the following.

1. Solve for $0° \le \theta \le 360°$. Give answers to the nearest tenth of a degree.

$\sin\theta = -0.43$

$\theta = \sin^{-1}(-.43) = -25.5°$

$360 - 25.5° = 334.5°$

$180 + 25.5° = 205.5°$

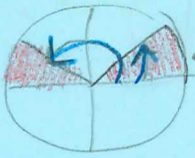
2. Solve for $0 \le \theta \le 2\pi$. Give answers to the nearest hundredth of a radian.

$8 = 9\csc\theta - 4$

$\frac{12}{9} = \csc\theta$

$\frac{9}{12} = \sin\theta$

$\theta = \sin^{-1}(9/12) = .85$



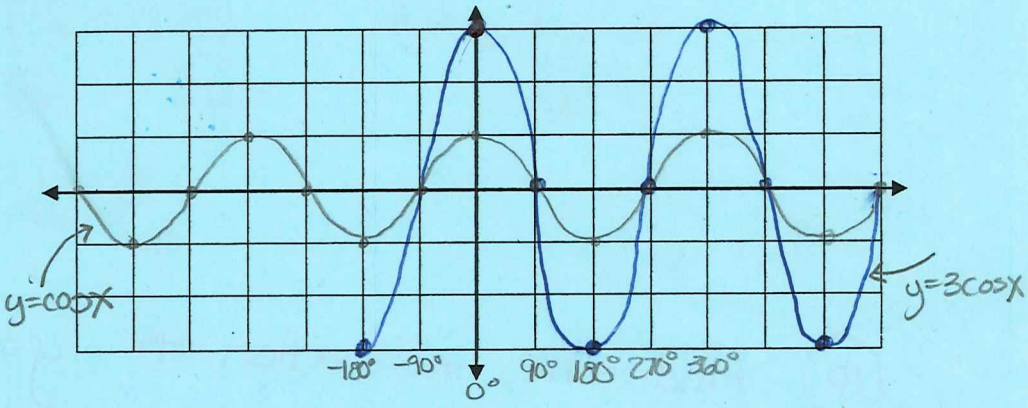
$.85\ \pi = .85 = 2.29$

3. Graph $y = 3\cos x$

for $0° \le x \le 360°$

$P = 360°$ or 2π

$A = 3$



4. Find the slope of the line described. Inclination = 140°

$m = \tan\alpha = \tan 140° = -.839$

5. Write the equation of the line that passes through (3, 5) and had an inclination of 85°.

$\tan(85) = 11.43$

$y - 5 = 11.43(x - 3)$

$y - 5 = 11.43x - 34.29$

$+5 \qquad +5$

$y = 11.43x - 29.29$

6. Find the inclination of the line with the equation of $3x - 5y = 9$.

$-5y = -3x + 9$

$y = \frac{3}{5}x - \frac{9}{5}$

$m = 3/5$

$\tan\alpha = 3/5$

$\alpha = \tan^{-1}(3/5)$

$\alpha = 30.96°$

7. Find the amplitude and the period of $y = 3\sin 4x$.

$P = \frac{360°}{4} = 90°$

or $\frac{2\pi}{4} = \pi/2$

$A = |3| = 3$

8. A sine curve varies between 6 and –6 with a period of 270°. Find its equation.

$y = \pm 6 \sin(4/3\, x)$

$P = \frac{360°}{B} = 270°$

$\frac{360}{270} = \frac{270}{270} B = \frac{12}{9} = \frac{4}{3}$

9. A cosine curve varies between 2 and –2 with a period of 4π. Find its equation.

$y = \pm 2 \cos(1/2 x)$

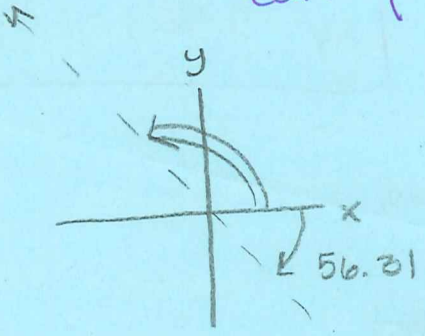
$P = \frac{2\pi}{B} = 4\pi$ $\quad \frac{4\pi B}{4\pi} = \frac{2\pi}{4\pi}$

$B = 1/2$

(10) Find the inclination of $y = \frac{-3}{2}x + 10$

$\tan^{-1}(m) = \alpha$

$\tan^{-1}(-3/2) = -56.31$



$180 - 56.31 = 123.69°$

Note To Self: Always two answers for inverses

II	I
−tan −cos +sin	+cos +sin +tan
−cos −sin +tan	+cos −sin −tan
III	IV