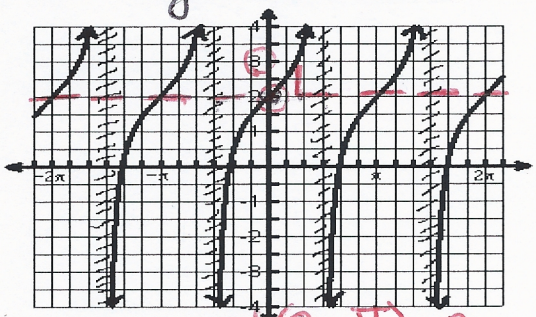
Writing Equations – Notes

1) period π asym: $\pm\frac{\pi}{2}, \pm\frac{3\pi}{2}$

a = 1 b = 1

c = none d = 2↑

Equation: $y = \tan\theta + 2$



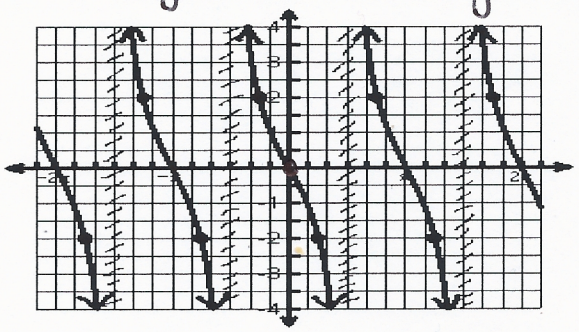
$y = -\cot(\theta - \frac{\pi}{2}) + 2$

2) period π asym: _____

a = 2 b = 1

c = none if tan d = 0

Equation: $y = -2\tan\theta$ OR $y = 2\cot(\theta - \frac{\pi}{2})$



3) period π asym: _____

a = 2 b = 2 $\frac{2\pi}{\pi} =$

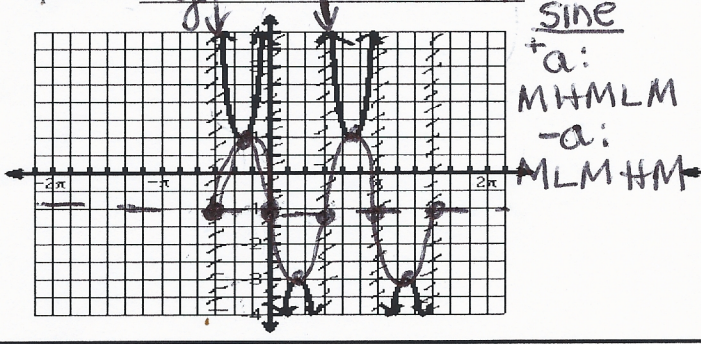
c = $\frac{\pi}{2}$ ← is a⁺ none if a⁻ d = −1

Equation: $y = 2\csc 2(\theta + \frac{\pi}{2}) - 1$

sine

+a: MHMLM

−a: MLMHM



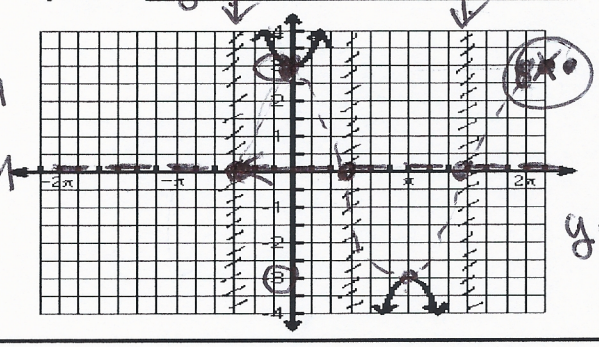
$y = -2\csc 2(\theta) - 1$

4) period 2π asym: _____

a = 3 b = 1

c = none d = 0 $\frac{2\pi}{2\pi} = 1$

Equation: $y = 3\sec\theta$



$y = 3\csc(\theta + \frac{\pi}{2})$

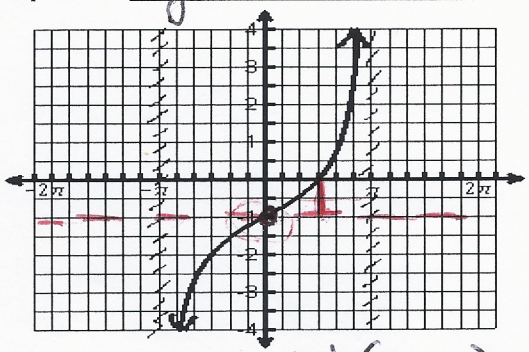
Writing Equations – Homework

5) period 2π asym: $\pm\pi, \pm 3\pi$

a = 1 b = $\frac{1}{2}$ $\frac{\pi}{2\pi}$

c = 0 OR π → d = −1

Equation: $y = \tan\frac{1}{2}\theta - 1$



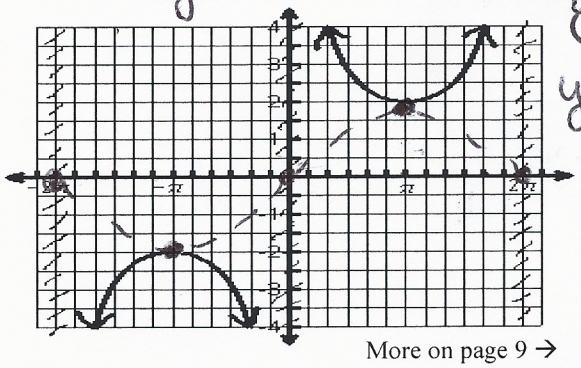
$y = -\cot\frac{1}{2}(\theta - \pi) - 1$

6) period 4π asym: $\pm 2\pi, 0$

a = 2 b = $\frac{1}{2}$

c = none d = 0

Equation: $y = 2\csc\frac{1}{2}\theta$ or $y = 2\sec\frac{1}{2}(\theta - \pi)$



$y = -2\sec\frac{1}{2}(\theta + \pi)$

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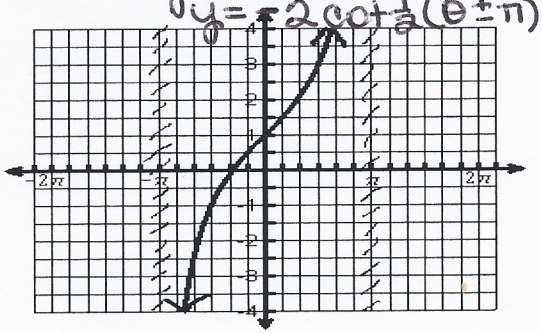
Writing Equations – Homework (cont'd)

7) period 2π asym: _____

a = 2 b = $\frac{1}{2}$

c = none if tan d = 1

Equation: $y = 2\tan\frac{1}{2}\theta + 1$ OR $y = 2\cot\frac{1}{2}(\theta \pm \pi) + 1$

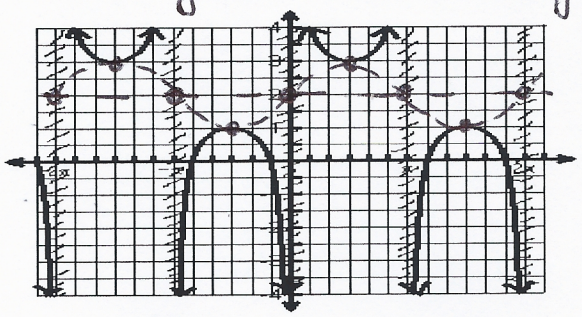


8) period 2π asym: _____

a = 1 b = 1

c = none if csc d = 2

Equation: $y = \csc\theta + 2$ OR $y = \sec(\theta - \frac{\pi}{2}) + 2$

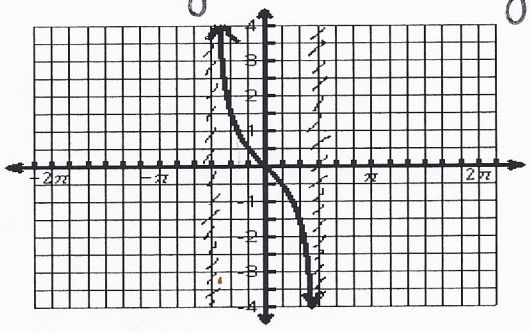


9) period π asym: _____

a = 1 b = 1

c = none if tan d = 0

Equation: $y = -\tan\theta$ OR $y = \cot(\theta - \frac{\pi}{2})$

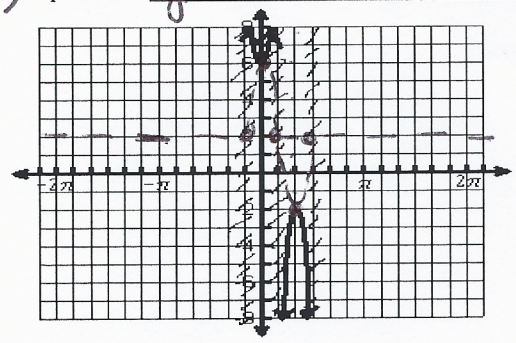


10) period $\frac{2\pi}{3}$ asym: _____ $\frac{2\pi}{2\pi/3} = 3$

a = 2 b = 3

c = none if sec d = 1

Equation: $y = 2\sec 3\theta + 1$ OR $y = 2\csc 3(\theta + \frac{\pi}{6}) + 1$

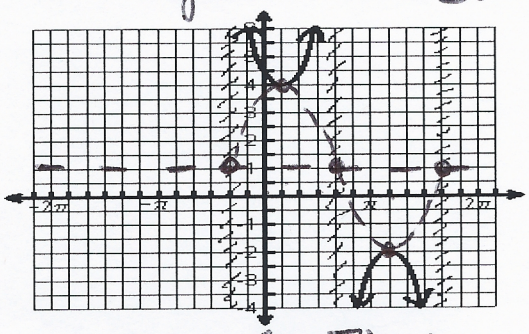


11) period 2π asym: _____

a = 3 b = 1

c = ~~$\frac{\pi}{3}$~~ d = 1

Equation: $y = 3\csc(\theta + \frac{\pi}{3}) + 1$



$y = 3\sec(\theta - \frac{\pi}{6}) + 1$

12) period 2π asym: _____

a = 1 b = $\frac{1}{2}$

c = none if cot d = 0

Equation: $y = -\cot\frac{1}{2}\theta$ OR $y = \tan\frac{1}{2}(\theta - \pi)$