SEC 2.6 GRAPH OF OTHER FUNCTION

1. TANGENT FUNCTION: $y = d + a \tan(b(x-c))$

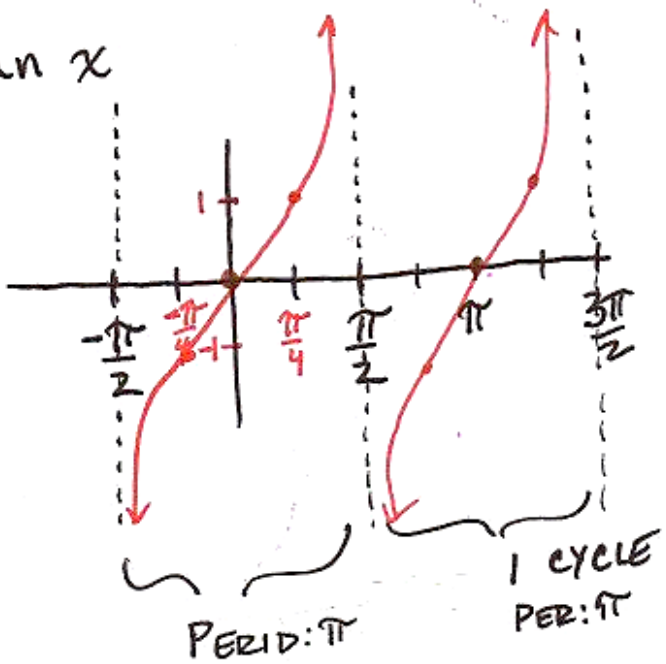
AMPLITUDE $|a|$

PERIOD: $\frac{\pi}{|b|}$

2. GRAPH: $y = \tan x$

AMP: 1

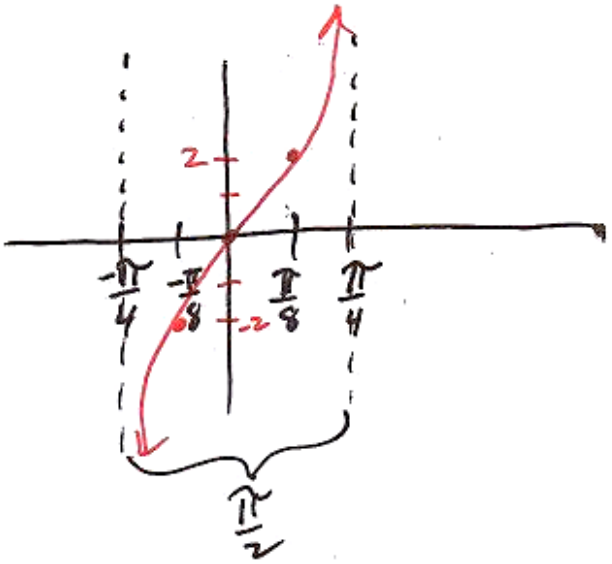
PER: $\frac{\pi}{1}$



EX. $y = 2 \tan 2x$

Amp. 2

PER: $\frac{\pi}{2}$



3. COTANGENT FUNCTIONS $y = d + a\cot(b(x-c))$

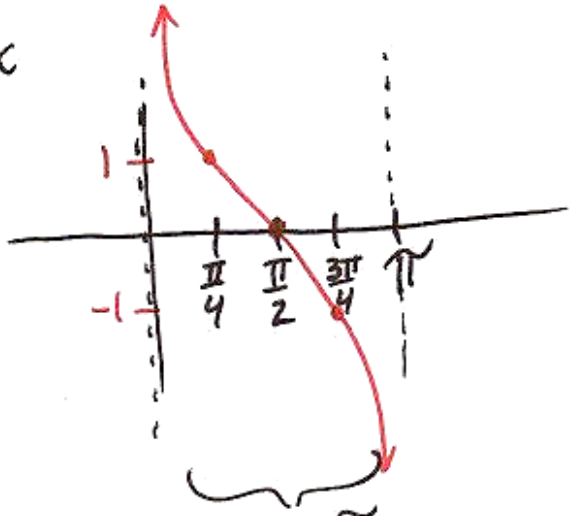
AMPLITUDE $|a|$

PERIOD: $\frac{\pi}{|b|}$

4. GRAPH: $y = \cot x$

AMP: 1

PER: π



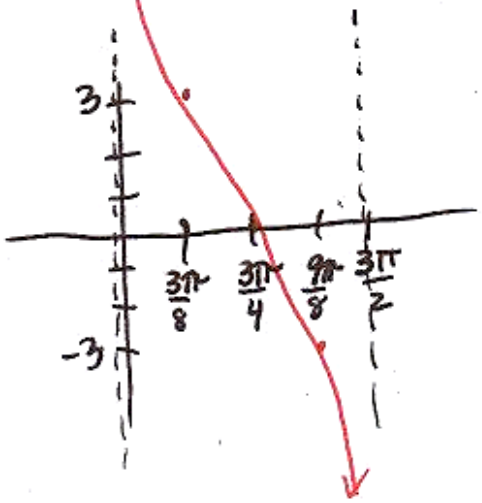
PER: π

1 CYCLE

EXAMPLE: $y = 3\cot\frac{2}{3}x$

AMP. 3

PER: $\frac{\pi}{\frac{2}{3}} \cdot \frac{3}{2} = \frac{3\pi}{2}$



5. COSECANT FUNCTIONS: $y = d + a\csc(b(x-c))$

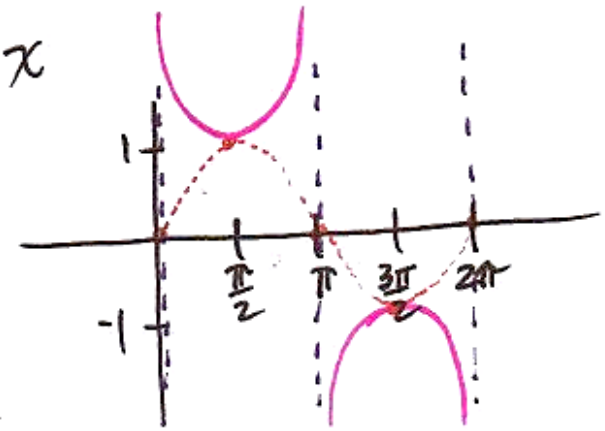
AMPLITUDE $|a|$

PERIOD: $\frac{2\pi}{|b|}$

6. GRAPH: $y = \csc x$

AMP: 1

PER: 2π



HOW TO GRAPH:

1) LIGHTLY SKETCH THE SINE FUNCTION

2) EVERYTIME THE SINE FUNCTION CROSSES THE x-AXIS, DRAW AN ASYMPTOTE:

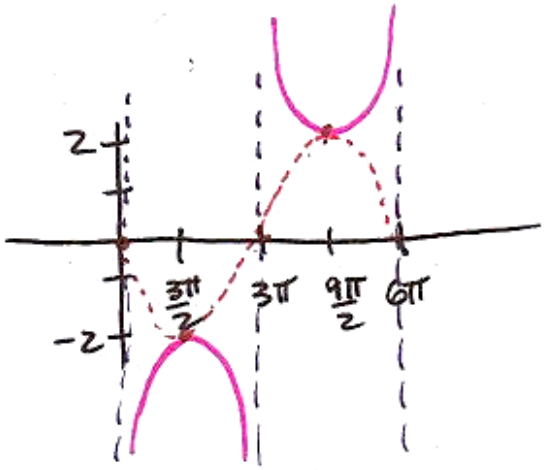
3) DRAW THE "VALLEYS" AND "HUMPS" OF COSECANT FUNCTION

EX. # 33 $y = -2\csc\frac{x}{3}$

AMP. 2

REFLECTED

PER. $\frac{2\pi}{\frac{1}{3}} \cdot \frac{3}{1} = 6\pi$



7. SECANT FUNCTION: $y = d + a \sec(b(x-c))$

AMPLITUDE $|a|$

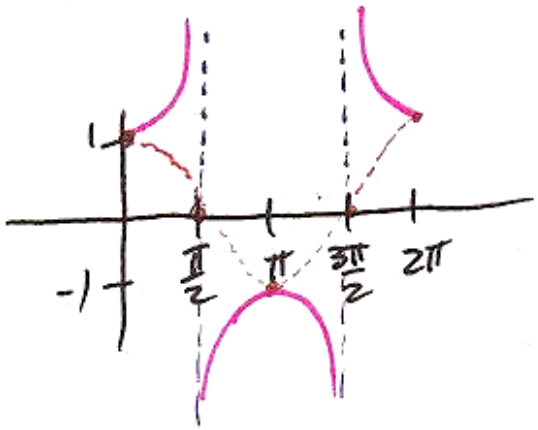
PER $\frac{2\pi}{|b|}$

8. GRAPH: $y = \sec x$

AMP: 1

PER: 2π

(LIGHTLY SKETCH THE COSINE GRAPH ...



#25 $y = 2 \sec x$

AMP: 2

PER: 2π