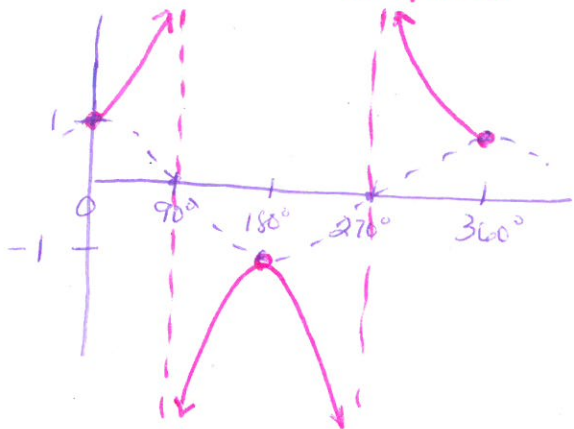


Formative Assessment Sections 3.1-3.3

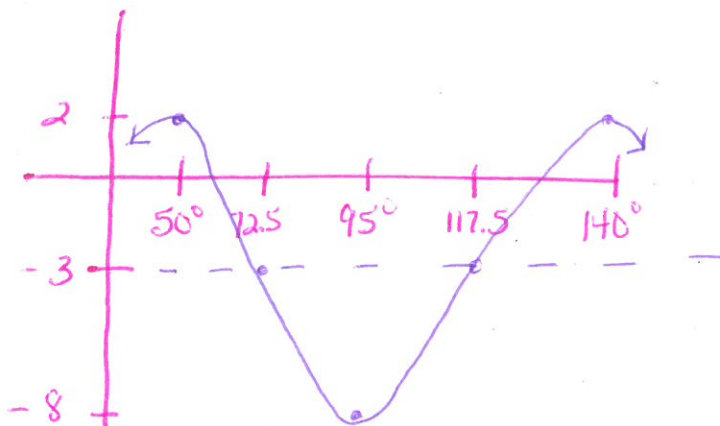
Name Key

Without using your calculator, graph:

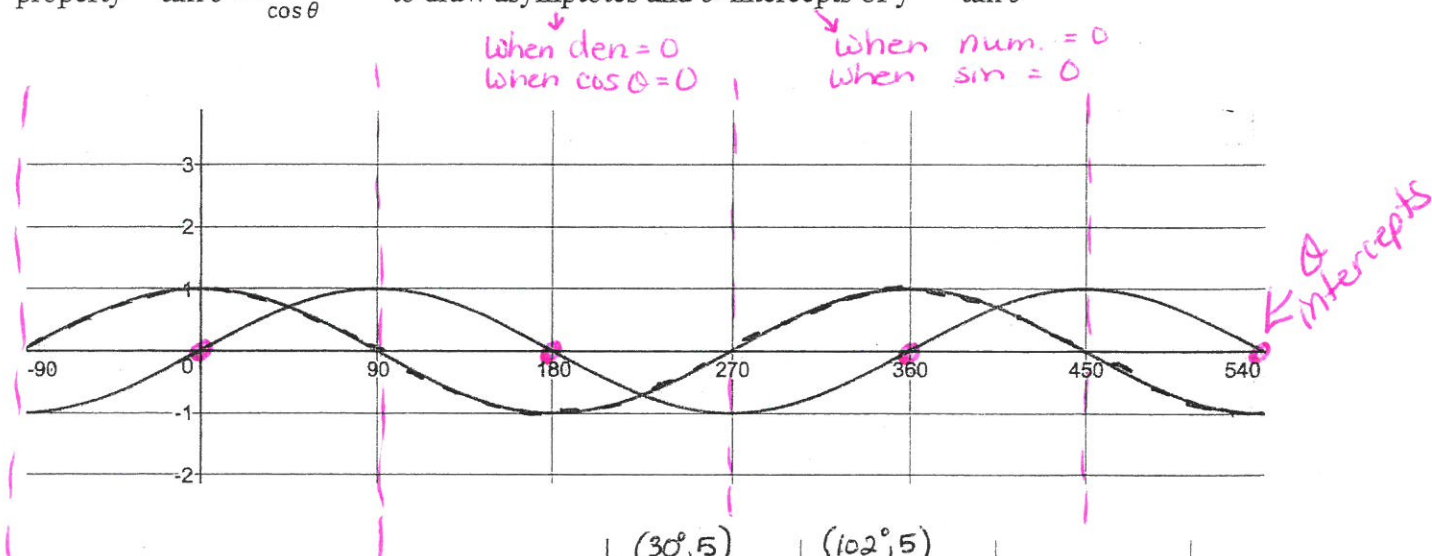
1.  $y = \sec \theta$  (in pink)



2.  $y = -3 + 5 \cos 4(\theta - 50^\circ)$

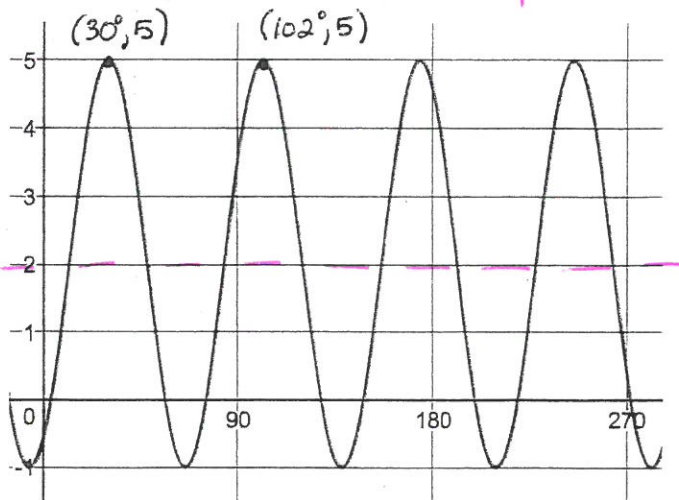


3. Dashed graph is  $y = \cos \theta$  and solid graph is  $y = \sin \theta$ . Use these graphs and the quotient property  $\tan \theta = \frac{\sin \theta}{\cos \theta}$  to draw asymptotes and  $\theta$ -intercepts of  $y = \tan \theta$



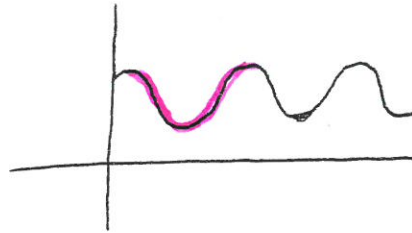
4. Write an equation of this sinusoid.

SA:  $y = 2$   
 Amp: 3  
 Ph. Disp:  $30^\circ$   
 Period:  $72^\circ$ , so h.d. =  $\frac{1}{5}$   
 ( $360 \div ? = 72$ )

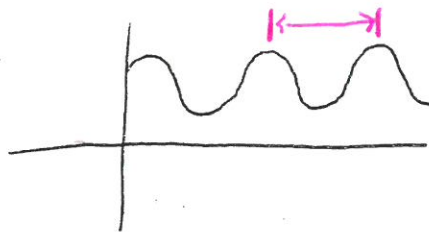


$y = 2 + 3 \cos 5(\theta - 30^\circ)$   
 or  $y = 2 + 3 \cos 5(\theta - 102^\circ)$

5. Darken exactly one cycle of this sinusoid.



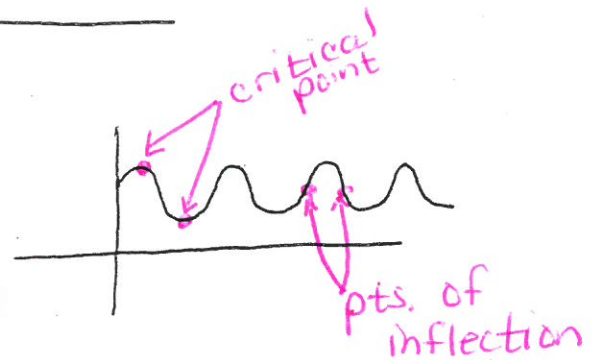
6. Show the period of this sinusoid.



7. Show a critical point and a point of inflection on this graph.

max or min

on sinusoidal axis  
@ change of concavity



8.  $y = -3 + 5 \cos 4(\theta - 50^\circ)$  Identify:

Vertical dilation: 5

vertical translation: -3

Horizontal dilation:  $\frac{1}{4}$

horizontal translation:  $50^\circ$

9. From #8 above,  
Identify:

Amplitude: 5

Phase displacement:  $50^\circ$

Period:  $90^\circ$   
 $360 \times \frac{1}{4}$

Sinusoidal axis:  $y = -3$