

Advanced Algebra Unit 10 Advanced Trig

Assignment #10

1) Complete the following table:

ϑ (degrees)	0	90	180	270	360	450
ϑ (radians)						
Sine						
cosine						
tangent						

2) Complete the following table:

ϑ (degrees)	30	45	60	135	150	240	315
ϑ (radians)							
Sine							
cosine							
tangent							

3) Use your calculator to evaluate:

a) $\sin 100$

b) $\sin 80$

c) $\sin 120$

d) $\sin 60$

e) $\sin 150$

f) $\sin 30$

g) $\sin 45$

h) $\sin 135$

Use the results from above to state $\sin(180 - \vartheta) =$ _____

4) Find the obtuse angle with the same sine as:

a) 45

b) 51

c) $\frac{\pi}{3}$

d) $\frac{\pi}{6}$

5) Use your calculator to evaluate:

a) $\cos 70$

b) $\cos 110$

c) $\cos 60$

d) $\cos 120$

e) $\cos 25$

f) $\cos 155$

g) $\cos 80$

h) $\cos 100$

Use the results to complete $\cos(180 - \vartheta) =$ _____

7) Find the obtuse angle which has the negative cosine of

a) 40

b) 19

c) $\frac{\pi}{5}$

d) $\frac{2\pi}{5}$

8) WITHOUT using your calculator find

a) $\sin 137$ if $\sin 43 = 0.6820$

b) $\sin 59$ if $\sin 121 = 0.8572$

c) $\cos 143$ if $\cos 37 = 0.7986$

d) $\cos 24$ if $\cos 156 = -0.0135$

e) $\sin 115$ if $\sin 65 = 0.9063$

f) $\cos 132$ if $\cos 48 = 0.6691$

9) Complete the table below

Quadrant	Degree measure	Radian Measure	$\cos \vartheta$	$\sin \vartheta$	$\tan \vartheta$
1	$0 < \vartheta < 90$	$0 < \vartheta < \frac{\pi}{2}$			
2					
3					
4					

In which quadrants are the following true?

a) $\cos \vartheta$ is positive

b) $\cos \vartheta$ is negative

c) $\cos \vartheta$ and $\sin \vartheta$ are both negative

d) $\cos \vartheta$ is negative and $\sin \vartheta$ is positive.

