

**(1.3) Sine, Cosine, and Tangent of Obtuse Angles**

What are *supplementary angles*? Define and illustrate below.

1. a) Is  $\angle A = 25^\circ$  acute or obtuse?

b) Find the supplementary angle for  $\angle A = 25^\circ$ .

c) Complete the table for the  $\angle A = 25^\circ$ .

	$\angle A = 25^\circ$	<b>Supplementary Angle =</b>
sin A		
cos A		
tan A		

2. a) Is  $\angle A = 105^\circ$  acute or obtuse?

b) Find the supplementary angle for  $\angle A = 105^\circ$ .

c) Complete the table for the  $\angle A = 105^\circ$ .

	$\angle A = 105^\circ$	<b>Supplementary Angle =</b>
sin A		
cos A		
tan A		

MAP 4C

3. What similarities do you notice about the trigonometric ratios for the supplementary angles that you found in question 1 and 2?

4. What is the measure of the angle(s) for each trigonometric ratio?

a)  $\sin A = 0.65$

b)  $\cos B = 0.22$

c)  $\tan C = -0.54$

**SUMMARIZE:**

To find a **supplementary angle** to angle A,

$$180^\circ - A$$

If angle A is **acute**:

$\sin A$  is \_\_\_\_\_

$\cos A$  is \_\_\_\_\_

$\tan A$  is \_\_\_\_\_

If angle B is **obtuse**:

$\sin A$  is \_\_\_\_\_

$\cos A$  is \_\_\_\_\_

$\tan A$  is \_\_\_\_\_