Name:_____

GCC 8.10: co-functions

$\sin\frac{o}{h}$ $\cos\frac{a}{h}$

Directions: Fill in the missing pieces to the following questions. All work deals with degrees.

1. Express sin A = $\frac{a}{c}$
2. Express cos B = $\frac{a}{c}$
3. Express sin B = $\frac{b}{c}$
4. Express cos A = $\frac{b}{c}$
5. $m\angle C = 90$
6. $m\angle A + m\angle B = 90$

7. a) What *term*, based upon the answer to #6, can be used to describe $\angle A$ and $\angle B$? Complementary
   b) Express $m\angle A$ in terms of $m\angle B$: $m\angle A = 90 - \angle B$

8. What observation(s) can be made regarding the sine and cosine of angles *A* and *B*?

$\sin A = \cos B$
$\sin B = \cos A$

Based upon the findings, we can state that:
$\sin(x) = \cos(90-x)$ and $\cos(x) = \sin(90-x)$

9. Find all values of x

a. $\sin 75^\circ = \cos(x)$

$75 + X = 90$
$X = 15$

c. $\sin(x) = \cos 60^\circ$

$X + 60 = 90$
$X = 30$

b. $\sin(2x + 14) = \cos(x - 5)$

$2x + 14 + x - 5 = 90$
$3x + 9 = 90$
$3x = 81$
$x = 27$

d. $\sin(x + 20) = \cos(2x + 10)$

$x + 20 + 2x + 10 = 90$
$3x + 30 = 90$
$3x = 60$
$x = 20$

$\sin A = \cos 2A$

$A + 2A = 90$
$3A = 90$
$A = 30$

Feb 24-12:05 PM