

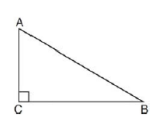
Geometry CC - Unit 8
 Lesson 10: Cofunctions
 M2 LO

Name: _____
 Date: _____

Definition: Cofunction: The trigonometric function of the complement of an angle.

1 In scalene triangle ABC shown in the diagram below, $m\angle C = 90^\circ$.

Which equation is always true?



1) $\sin A = \sin B$
 2) $\cos A = \cos B$
 3) $\cos A = \sin C$
 4) $\sin A = \cos B$

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2 If $\sin 6A = \cos 9A$, then $m\angle A$ is equal to

1) 6
 2) 36
 3) 45
 4) $1\frac{1}{2}$

$6A + 9A = 90$
 $15A = 90$
 $A = 6$

3 If $\sin 2A = \cos 3A$, then $m\angle A$ is

1) $1\frac{1}{2}$
 2) 5
 3) 18
 4) 36

$2A + 3A = 90$
 $5A = 90$
 $A = 18$

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4 If $\sin(A - 30^\circ) = \cos 60^\circ$, the number of degrees in the measure of angle A is

1) 30
 2) 60
 3) 90
 4) 120

$A - 30 + 60 = 90$
 $A + 30 = 90$
 $A = 60$

5 If $\cos(x + 30^\circ) = \sin x$, a measure of angle x is

1) 15°
 2) 30°
 3) 45°
 4) 60°

$x + 30 + x = 90$
 $2x + 30 = 90$
 $2x = 60$
 $x = 30$

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16 Find the value of acute angle A if $\frac{\sin A}{\cos 50^\circ} = \frac{1}{1}$

$\sin A = \cos 50^\circ$
 $A + 50 = 90$
 $A = 40$

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17 In right triangle ABC with the right angle at C , $\sin A = 2x + 0.1$ and $\cos B = 4x - 0.7$. Determine and state the value of x . Explain your answer.

$\sin A = \cos B$
 $2x + .1 = 4x - .7$
 $\frac{-2x}{-2x} \quad \frac{-2x}{-2x}$

$.1 = 2x - .7$
 $\frac{+.7}{+.7} \quad \frac{+.7}{+.7}$

$\frac{.8 = 2x}{2} \quad x = .4$

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