Name: _____

G.SRT.C.7: Cofunctions 2

1 If $\sin 6A = \cos 9A$, then $m\angle A$ is equal to
   1) 6
   2) 36
   3) 45
   4) $1\frac{1}{2}$

2 If $\sin 2A = \cos 3A$, then $m\angle A$ is
   1) $1\frac{1}{2}$
   2) 5
   3) 18
   4) 36

3 If $\sin(A - 30)° = \cos 60°$, the number of degrees in the measure of angle A is
   1) 30
   2) 60
   3) 90
   4) 120

4 Which is a value of x if $\sin 60° = \cos(x + 10)°$?
   1) 10°
   2) 20°
   3) 50°
   4) 60°

5 If $\cos(x + 30°) = \sin x$, a measure of angle x is
   1) 15°
   2) 30°
   3) 45°
   4) 60°

6 If $\sin(x + 20°) = \cos x$, the value of x is
   1) 35°
   2) 45°
   3) 55°
   4) 70°

7 If $\cos(2x - 1)° = \sin(3x + 6)°$, then the value of x is
   1) −7
   2) 17
   3) 35
   4) 71

8 If $\sin(x - 3)° = \cos(2x + 6)°$, then the value of x is
   1) −9
   2) 26
   3) 29
   4) 64

9 Which value of x satisfies the equation $\sin(3x + 5)° = \cos(4x + 1)°$?
   1) 30
   2) 24
   3) 12
   4) 4

10 If $\cos 72° = \sin x$, find the number of degrees in the measure of acute angle x.

11 If $3x$ is the measure of a positive acute angle and $\cos 3x = \sin 60°$, find the value of x.

12 If x is a positive acute angle and $\sin x = \cos(x + 20°)$, find the value of x.

13 If $\cos(2x - 25)° = \sin 55°$, find the value of x.

14 If $\sin(2x + 20)° = \cos 40°$, find x.

15 Find the value of acute angle A if $\dfrac{\sin A}{\cos 50°} = 1$.

G.SRT.C.7: Cofunctions 2
Answer Section

  1 ANS: 1
    $6A + 9A = 90$. As originally written, distractor (3) was $A = 54$, also a correct response.

$$15A = 90$$
$$A = 6$$

    REF: 010320b

  2 ANS: 3
    $2A + 3A = 90$

$$5A = 90$$
$$A = 18$$

    REF: 069621siii

  3 ANS: 2
    $A - 30 + 60 = 90$

$$A = 60$$

    REF: 068025siii

  4 ANS: 2
    $60 + x + 10 = 90$

$$x = 20$$

    REF: 068717siii

  5 ANS: 2
    $x + 30 + x = 90$

$$2x = 60$$
$$x = 30$$

    REF: 088622siii

  6 ANS: 1
    $x + 20 + x = 90$

$$2x = 70$$
$$x = 35$$

    REF: 019729siii

7 ANS: 2
$$2x - 1 + 3x + 6 = 90$$
$$5x = 85$$
$$x = 17$$

REF: 089633siii

8 ANS: 3
$$x - 3 + 2x + 6 = 90$$
$$3x = 87$$
$$x = 29$$

REF: 069825siii

9 ANS: 3
$$3x + 5 + 4x + 1 = 90$$
$$7x = 84$$
$$x = 12$$

REF: 019428siii

10 ANS:
$$72 + x = 90$$
$$x = 18$$

REF: 089704siii

11 ANS:
$$3x + 60 = 90$$
$$3x = 30$$
$$x = 10$$

REF: 010404siii

12 ANS:
$$x + x + 20 = 90$$
$$2x = 70$$
$$x = 35$$

REF: 088415siii

13 ANS:
$$2x - 25 + 55 = 90$$
$$2x = 60$$
$$x = 30$$

REF: 069912siii

14   ANS:

$$2x + 20 + 40 = 90$$
$$2x = 30$$
$$x = 15$$

REF: 060310siii

15   ANS:

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

REF: 018712siii