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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CoFunctions**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| http://regentsprep.org/Regents/math/algtrig/ATT6/copic1.gif**\*\*The sine of an acute angle is equal to the cosine of its complement.**(90-Ѳ)**\*\*The cosine of an acute angle is equal to the sine of its complement.** |

 | In the diagram at the left, the measures of the angles designated by Ѳ and add to 90º.  These angles are complementary angles.

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| --- | --- | --- | --- | --- |
| In this triangle,  |  | and |  |  |
| In this triangle,  |  | and |  |  |
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**\*\*The value of a** [**trig function**](http://www.mathwords.com/t/trig_functions.htm) **of an** [**angle**](http://www.mathwords.com/a/angle.htm) **equals the value of the cofunction of the** [**complement**](http://www.mathwords.com/c/complement_angle.htm) **of the angle.****Cofunction Identities, in** [**degrees**](http://www.mathwords.com/d/degree.htm)**:**

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| --- |
| **Sine** and **cosine** are cofunctions.http://regentsprep.org/Regents/math/algtrig/ATT6/cofunc7.gif |

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| Notice the connection of the letters **C** & **O**: \* sine and **co**sine **co**functions  \* **co**mplementary | **http://regentsprep.org/Regents/math/algtrig/ATT6/j0338122.gif** |

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 |
| **Examples:**1. If , then  is equal toa) 6 c) 54b) 36 d)  2. If , the number of degrees in the measure of angle  isa) 30 c) 90b) 60 d) 1203. If , a measure of angle *x* isa) 15º c) 45ºb) 30º d) 60º4. If , then  isa)  c) 18b) 5 d) 365. If , then the value of *x* isa) -7 c) 35b) 17 d) 716. If , the value of *x* isa) 35º c) 55ºb) 45º d) 70º7. If , then the value of *x* isa) -9 c) 29b) 26 d) 648. Which is a value of *x* if ?a) 10º c) 50ºb) 20º d) 60º9. Which value of *x* satisfies the equation ?a) 30 c) 12b) 24 d) 410. Find a value of ɵ for which sin ɵ = cos 15o is true.11. If *x* is a positive acute angle and , find the value of *x*. |
| 12. If 3*x* is the measure of a positive acute angle and , find the value of *x*.13. If *,* find the number of degrees in the measure of acute angle *x*. |
| 14. If , find the value of *x*.15. If , find *x*. |