|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CoFunctions**   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | 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.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | In this triangle, |  | and |  |  | | In this triangle, |  | and |  |  | |  |  |  |  |  | |  |  |  |  | |   **\*\*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)**:**   |  | | --- | | **Sine** and **cosine** are cofunctions.  http://regentsprep.org/Regents/math/algtrig/ATT6/cofunc7.gif |      |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | 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** | | | | | |
| **Examples:**  1. If , then  is equal to  a) 6 c) 54  b) 36 d)    2. If , the number of degrees in the measure of angle  is  a) 30 c) 90  b) 60 d) 120  3. If , a measure of angle *x* is  a) 15º c) 45º  b) 30º d) 60º  4. If , then  is  a)  c) 18  b) 5 d) 36  5. If , then the value of *x* is  a) -7 c) 35  b) 17 d) 71  6. If , the value of *x* is  a) 35º c) 55º  b) 45º d) 70º  7. If , then the value of *x* is  a) -9 c) 29  b) 26 d) 64  8. Which is a value of *x* if ?  a) 10º c) 50º  b) 20º d) 60º  9. Which value of *x* satisfies the equation ?  a) 30 c) 12  b) 24 d) 4  10. 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*. |