Solving Trigonometry Problems

Write a trig equation and isolate *x*. Then, use the Table of Trigonometric Values to evaluate the measure of *x*. Round angles to the nearest degree and sides to the nearest tenth.

|  |  |  |
| --- | --- | --- |
| **EXAMPLE**H: 6, O: *x*, A: ??? *Look it up on the table* | **EXAMPLE**H: ???, O: 2 A: 8*Divide to make decimal with 4 places.**tanA = .2500 is between .2493 (14˚) & .2679 (15˚).**2500-****2493****=7* ***closer!******2679****-2500=179* | **EXAMPLE**H: *x*, O: ??? A: 12 *Plug in the value…* |
| 1.  | 2.  | 3.  |
| 4.  | 5.  | 6.  |

Make sure you pay attention to the problem. It doesn’t always want you to find the value of *x*. Sometimes, it only wants the set-up, and other times it’s setting you up to make a mistake. You have to know what the problem wants, and what you’ll need to do to get it.

|  |  |  |
| --- | --- | --- |
| **EXAMPLE**Write the trigonometric ratio and solve for *x*. Write your answer as a fraction.H: *x*, O: ???, A: 8 | 7. Write the trigonometric ratio and solve for *x*. Write your answer as a fraction. | 8. Write the trigonometric ratio and solve for *x*. Write your answer as a fraction. |
| **EXAMPLE**Determine the length of *DE*. Round to the nearest hundredth.*DE is what I want, so that’s x.*H: *x*, O: ???, A: 5.1*Use long division to simplify.* | 9. Determine the length of *GH*. Round to the nearest hundredth. | 10. Determine the length of *LM*. Round to the nearest hundredth. |
| **EXAMPLE**Use a special right triangle to write as a fraction.*First, you need to draw the picture. Draw and label a 30-60-90 triangle.* H: , O: , A:  | 11. Use a special right triangle to write as a fraction. | 12. Use a special right triangle to write as a fraction. |