

Key

Solve the equation below, writing a complete sentence to explain each step taken. Credit is awarded for correctness of mathematics (10 points), correctness and completeness of explanations (15 points) and neatness and grammar (5 points). You may use calculators, notes, books, but not the paper of another person on this assessment. (This one is NOT for practice!!)

Scenario: The average price of an apartment in Corpus Christi has risen by 12% in the last year to \$575.

Question: What was the average price of an apartment last year?

Let x be the average price of an apartment last year. With a 12% increase, the price this year should be the original price plus 12% of that price. As an equation, this is represented as

$$x + (.12)x = 575$$

Solve this equation by factoring out the x and dividing by the resulting factor, 1.12

$$x(1 + .12) = 575$$

$$x(1.12) = 575$$

$$x = \frac{575}{1.12} = \$513.39$$

That is, the avg. price of an apartment last year was \$513.39.