

TAKS Objective 7
TEK 8.7B
Tutorial
(Grades 9 and 10)

...use geometric concepts and properties to solve problems in fields such as art and architecture.

Area applications may be asked.

For example, find the cost of covering a 12' x 14' room with tile if the tile costs \$3.50 per square foot.

First, find the area.

(That is what “square foot” implies.)

$$A = bh = 12 \times 14 = 168$$

Then, find the cost.

Multiply the square footage by the cost.

$$168 \times 3.50 = \$588. \text{ (Answer)}$$

Scale problems may be asked.

For example, on a map the distance from A to B is 2 inches. The scale of the map is $\frac{1}{4}$ " = 2 miles. What is the actual distance from A to B?

You can reason through this.

If $\frac{1}{4}$ " = 2 miles, then 1" = 8 miles.

Therefore, 2 inches = 16 miles.

Or, you can set up a proportion as on the next page.

Scale problems may be asked.

For example, on a map the distance from A to B is 2 inches. The scale of the map is $\frac{1}{4}$ " = 2 miles. What is the actual distance from A to B?

You can set up a proportion and solve.

$$\begin{array}{l} \text{in} \\ \text{mi} \end{array} \frac{\frac{1}{4}}{2} = \frac{2}{?}$$

$$\frac{2(2)}{\frac{1}{4}} = 16$$

Conversions may be asked for directly or indirectly.

Pay attention to the units given in the problem and in the answer.

If a conversion is needed, convert early to avoid problems later.

Recall a few basic facts.

The angles of a triangle add up to 180.

The angles of a quadrilateral add up to 360.

A circle is 360 degrees.