

Name \_\_\_\_\_

Date \_\_\_\_\_

## Abstract Decimal Multiplication Lesson and Practice

The blue stick is  90 pixels long. It is being scaled. Complete the corresponding multiplication sentence.

$0.7 \times \text{} \longrightarrow \text{$ $0.7 \times 90 \text{ px} = \text{_____ px}$
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Scaling a 'stick':

Scaling means expanding or shrinking something by some factor.

Scaling is a useful model for multiplication. Let's look at scaling a "stick" (a line segment).

This blue stick is 90 pixels long. Now let's scale the blue stick to be 0.7 times as long as it is at first:



We can write a multiplication equation:

$0.7 \times \text{} = \text{$

In pixels,  $0.7 \times 90 \text{ px} = 63 \text{ px}$ .

The number we multiply by (0.7 above) is called the scaling factor.

If the scaling factor is more than 1, the resulting stick is longer than the original one .

If the scaling factor is less than 1, such as 0.5 or 0.66, the resulting stick is shorter.

Answer: 63

### Practice Problems

1	$0.1 \times \text{} \longrightarrow \text{$ $0.1 \times 90 \text{ px} = \text{_____ px}$	2	$0.3 \times \text{} \longrightarrow \text{$ $0.3 \times 90 \text{ px} = \text{_____ px}$
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