

Name _____

Date _____

Mr. Tallman

Homework #31 - Scale Drawings and Scale Factor

Use the word bank to answer questions 1-4

Word Bank			
Enlargement	Reduction	Scale Drawing	Scale Factor

1) Another name for the constant of proportionality when dealing with scale drawings is the Scale factor.

2) A scale drawing that is *smaller* than the actual object is called a(n) reduction.

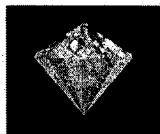
3) A scale drawing that is *larger* than the actual object is called a(n) Enlargement.

4) A drawing that is proportional to an original object and is either an enlargement or reduction of the original object is called a Scale drawing.

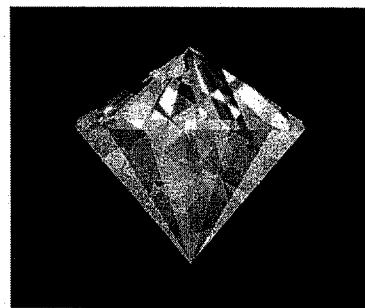
Identify the following diagrams as either an enlargement or reduction.

5) enlargement

Actual Picture

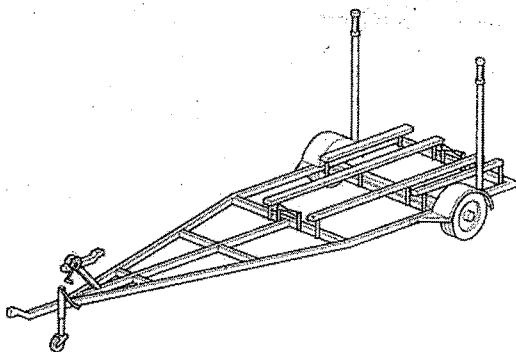


b. Scale Drawing

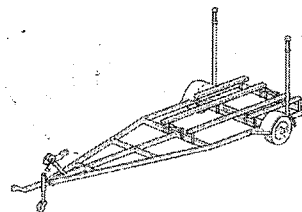


6) reduction

Actual Picture



Scale Model

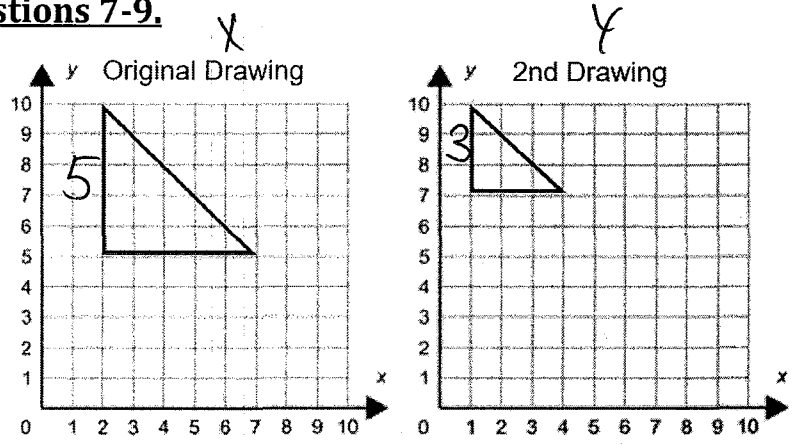


Use the following diagram to answer questions 7-9.

7) Is the second drawing a scale drawing of the first? Show all work.

$$\frac{y}{x} \frac{\text{Scale}}{\text{Actual}} = \frac{3}{5} = 0.6$$

Scale drawing!



8) What is the scale factor? $K=0.6$

9) Is the second drawing an enlargement or a reduction of the original? Explain. Use the scale factor in your explanation.

Reduction since the scale factor is less than 1.

Review

Solve the following proportions. Round to the nearest tenth if necessary.

<p>1) $\frac{78}{36} = \frac{26}{a}$</p> $\frac{78a}{78} = \frac{936}{78}$ <p>$a = 12$</p>	<p>2) $\frac{30}{b} = \frac{19.9}{51.6}$</p> $\frac{19.9b}{19.9} = \frac{1548}{19.9}$ <p>$b = 77.8$</p>
<p>3) The cost of 31 kg of tomatoes is \$155. How much would 2 kg cost?</p> $\frac{\$}{\text{kg}} \quad \frac{155}{31} = \frac{x}{2}$ $\frac{155x}{31} = \frac{310}{31}$ <p>$x = \\$10$</p>	<p>4) A car travels 195 kilometers in 1.7 hours. If the speed of the boat is constant, how long would it take for the boat to travel 282 kilometers?</p> $\frac{\text{km}}{\text{hrs}} \quad \frac{195}{1.7} = \frac{282}{x}$ $\frac{195x}{195} = \frac{479.4}{195}$ <p>$x = 2.5 \text{ hrs}$</p>