

Name: _____ Date: _____

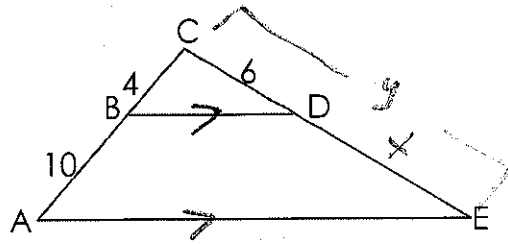
Similarity Review Sheet

1. Given $\overline{BD} \parallel \overline{AE}$, find DE and CE.

$$\frac{4}{6} = \frac{10}{x} \quad 4x = 60$$

$$x = 15 = DE$$

$$y = 15 + 6 = 21 = CE$$



A model of a building has a scale of 2 in to 15 ft.

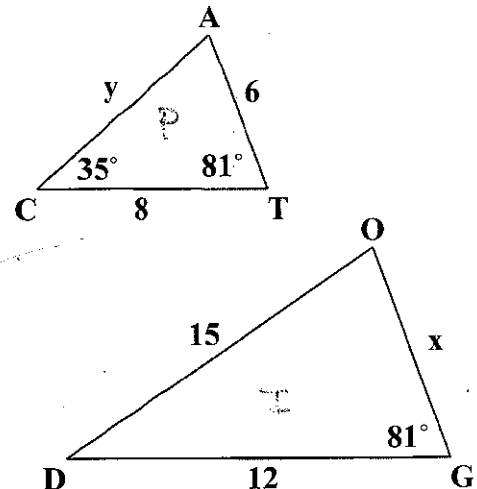
2. If the model is 5 in tall, how tall is the actual building? $5 \text{ in} = 15 \text{ ft}$
 37.5 ft

In the diagram, $\triangle CAT \sim \triangle DOG$. Use the diagram to find each of the following.

3. Scale factor of $\triangle CAT$ to $\triangle DOG$ (Simplify if necessary)

$$k = 1.5 = \frac{12}{8}$$

4. Find x and y (Show Work!) $\frac{12}{8} = \frac{y}{6} \quad 70 = 8x \quad \frac{12}{8} = \frac{15}{y} \quad 12y = 120$
 $x = 9 \quad y = 10$



5. Find $m\angle D = 35^\circ$

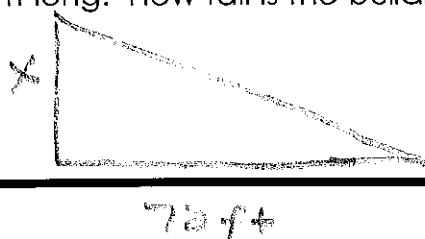
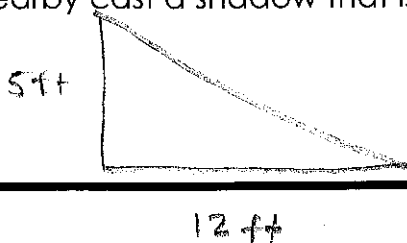
6. Find $m\angle O = 67^\circ$

7. Find the perimeter of $\triangle CAT = 24$

Find the perimeter of $\triangle DOG = 36$

8. What is the ratio (scale factor) of the perimeter of $\triangle CAT$ to the perimeter of $\triangle DOG$? $\frac{36}{24} = \frac{3}{2} = 1.5$

9. A boy who is 5 ft. tall cast a shadow that is 12 ft long. At the same time, a building nearby cast a shadow that is 72 ft long. How tall is the building? Draw a picture!



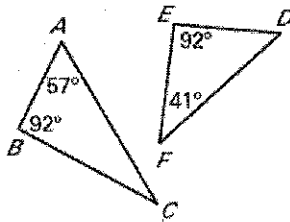
$$\frac{5}{12} = \frac{x}{72}$$

$$12x = 360$$

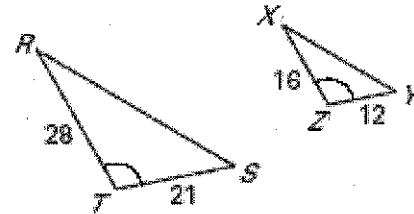
$x = 30 \text{ ft}$

Explain why the triangles are similar and write a similarity statement.

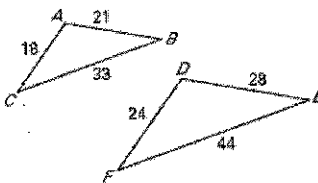
10. $\triangle ABC \sim \triangle DEF$ by AA



11. $\triangle RST \sim \triangle XYZ$ by SAS



12. $\triangle ABC \sim \triangle DEF$ by SSS



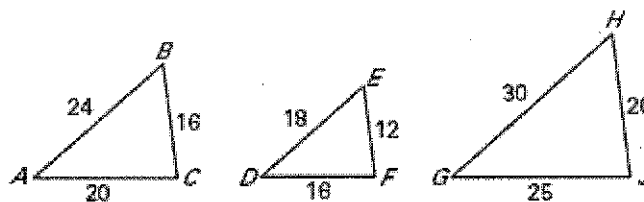
$$\frac{28}{16} = \frac{21}{12}$$

$$336 = 336 \checkmark$$

$$\frac{18}{24} = \frac{21}{28} = \frac{33}{44}$$

$$\frac{3}{4} = \frac{3}{4} = \frac{3}{4}$$

Determine which of the triangles ($\triangle DEF$ or $\triangle GHJ$) is similar to $\triangle ABC$:



$\triangle DEF \times$

$$\frac{24}{18} = \frac{16}{12} = \frac{20}{16}$$

$$\frac{4}{3} = \frac{4}{3} \neq \frac{5}{4}$$

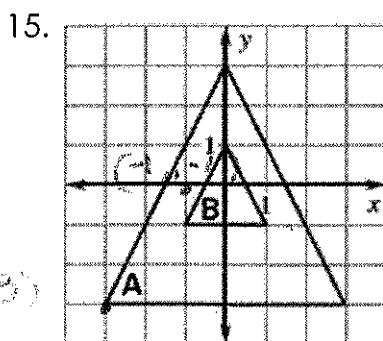
$$\frac{24}{18} \cdot \frac{16}{20} = \frac{20}{25}$$

$$\frac{4}{3} \cdot \frac{4}{5} = \frac{16}{15} \neq \frac{4}{5} \checkmark$$

13. Complete the Similarity Statement to $\triangle ABC \sim \triangle \underline{GHJ}$

14. Find the Scale Factor from $\triangle ABC$ to your answer from #13. = $\frac{4}{5}$

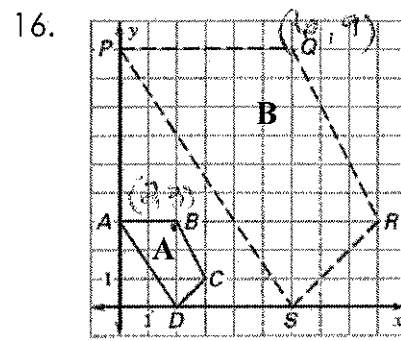
Determine whether the dilation from Figure A to Figure B is a reduction or an enlargement. Then find its scale factor and simplify if possible.



$(-3, -3)$

Reduction or enlargement?

scale factor = $\frac{1}{3}$



Reduction or enlargement?

scale factor = 3