

Practice

Student Edition
Pages 346-353

Exploring Similar Polygons

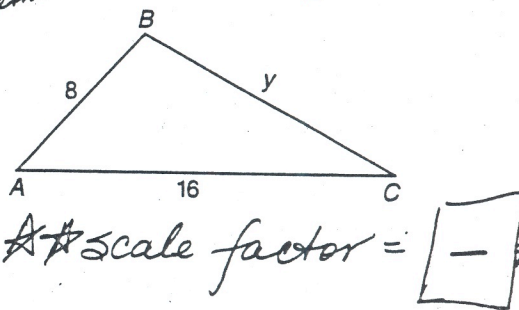
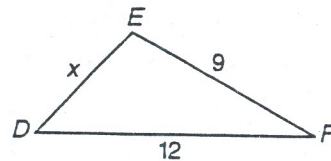
Sheet 8.4

In the figure at the right, $\triangle ABC$ is similar to $\triangle DEF$.

1. Write three equal ratios to show corresponding sides are proportional.

$$\frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF}$$

← use the similarity statement.



2. Find the value of x .

use scale factor!

3. Find the value of y .

use scale factor!

4. Find the ratio $\frac{m\angle A}{m\angle D}$.

(pretend that $m\angle A = 50^\circ$)
(then pretend that $m\angle A = 80^\circ$) } your answers should match!

In the figure at the right, quadrilateral ABCD is similar to quadrilateral EFGH.

5. Write four equal ratios to show corresponding sides are proportional.

$$\frac{AB}{EF} = \frac{BC}{FG} = \frac{CD}{GH} = \frac{DA}{HE}$$

← use the similarity statement.

★ scale factor = $\frac{AB}{EF} = \frac{4}{2} = 2$ ★

6. Find AB.

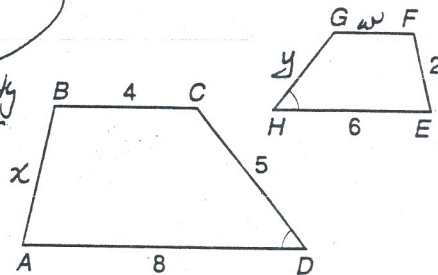
use scale factor!

7. Find HG.

use scale factor!

8. Find FG.

use scale factor!



9. The sum of the measures of $\angle A$ and $\angle C$ equals the sum of the measures of which two angles of quadrilateral EFGH? $\angle _ \neq \angle _$

10. Similarity means:

① about angles →

② about sides →

(use orange sheet, then memorize!!!)