Name _____ Date _____ Class _____

SECTION 5B

Ready to Go On? Skills Intervention

5-6 Similar Figures and Proportions

Similar figures have the same shape but are different sizes. Their **corresponding sides** are in proportion and their **corresponding angles** are equal.

Vocabulary
- similar
- corresponding sides
- corresponding angles

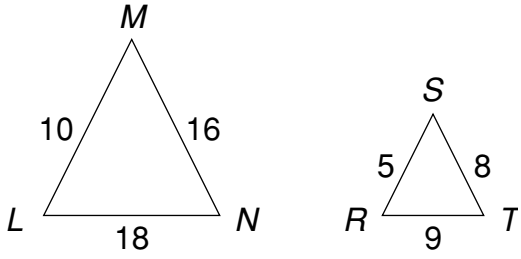
Determining Whether Two Triangles Are Similar

Identify the corresponding sides and use ratios to determine whether the triangles are similar.

$\overline{LM}$ corresponds to _____.

_____ corresponds to $\overline{ST}$.

$\overline{LN}$ corresponds to _____.



$\frac{\overline{RS}}{\quad} = \frac{MN}{\quad} = \frac{\overline{RT}}{\quad}$ Use the above sentences to write possible proportions.

$\frac{10}{\quad} = \frac{\quad}{8} = \frac{18}{\quad}$ Substitute values for the side lengths.

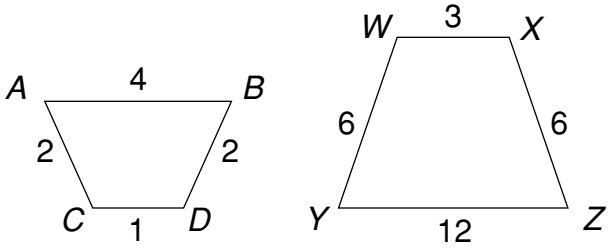
$10 \cdot 8 = 16 \cdot 5$ What is the cross product for $\frac{10}{5} = \frac{16}{8}$? _____ = _____

$16 \cdot 9 = 8 \cdot 18$ What is the cross product for $\frac{16}{8} = \frac{18}{9}$? _____ = _____

The triangles are _____ because the _____ are equal.

Determine Whether Two Four-Sided Figures Are Similar

Write each set of corresponding sides as a ratio.



$\frac{AB}{YZ}$ _____ corresponds to _____.

$\frac{AC}{YW}$ _____ corresponds to _____.

$\frac{CD}{WX}$ _____ corresponds to _____.

$\frac{BD}{ZX}$ _____ corresponds to _____.

$\frac{AB}{YZ} = \frac{\quad}{\quad} = \frac{AC}{YW} = \frac{\quad}{\quad}$ Set the ratios equal to each other.

$\frac{\quad}{\quad} = \frac{1}{3} = \frac{\quad}{\quad} = \frac{2}{6}$ Substitute.

$\frac{1}{3} = \frac{1}{3} = \frac{1}{3} = \frac{1}{3}$ Simplify. The figures are _____.