# February 16, 2012

M7H

Get out everything that needs to be scored.

# 2/16 - Similar Figures

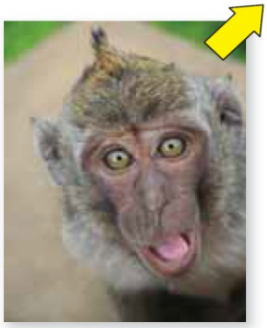
Original Photograph

**Similar means:**

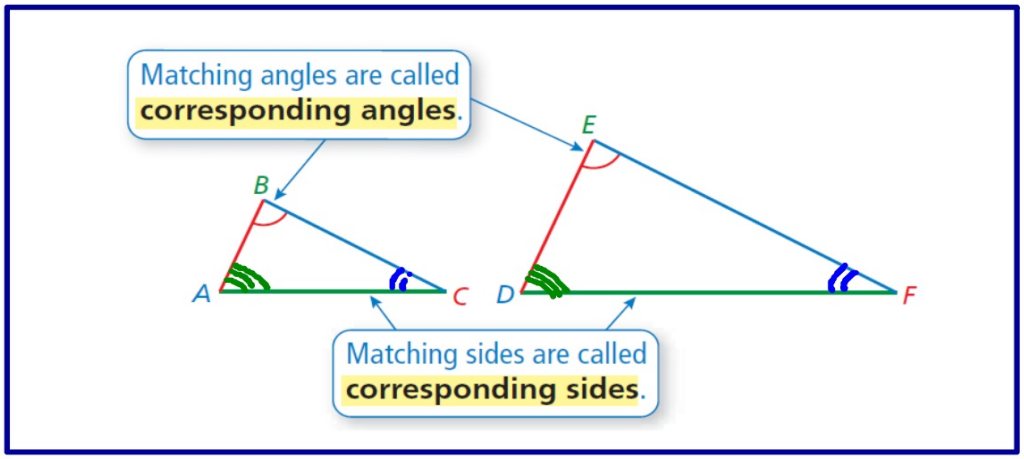
Same shape
different size

Distorted

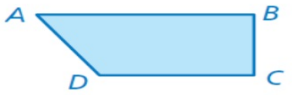
Distorted



Proportional




**The trapezoids are similar. (a) Name the corresponding angles. (b) Name the corresponding sides.**



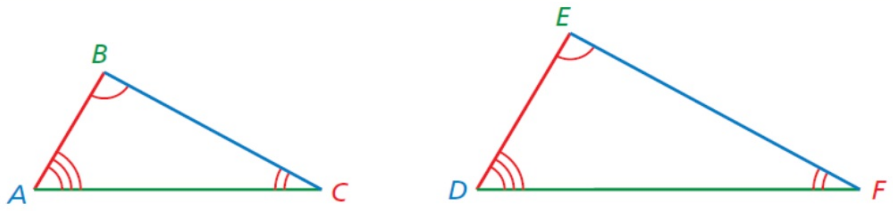


**a. Corresponding angles:**

$\angle A$ and $\angle P$
$\angle B$ and $\angle Q$
$\angle D$ and $\angle S$
$\angle C$ and $\angle R$

**b. Corresponding sides:**

$\overline{AB}$ and $\overline{PQ}$
$\overline{BC}$ and $\overline{QR}$
$\overline{DC}$ and $\overline{SR}$
$\overline{AD}$ and $\overline{PS}$




Triangle $ABC$ is similar to triangle $DEF$: $\triangle ABC \sim \triangle DEF$

new definition

Two figures are similar if

- corresponding side lengths are proportional, and
- corresponding angles have the same measure.

***Side Lengths***

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

***Angles***

$\angle A = \angle D$

$\angle B = \angle E$

$\angle C = \angle F$

**Discuss with your partner:**

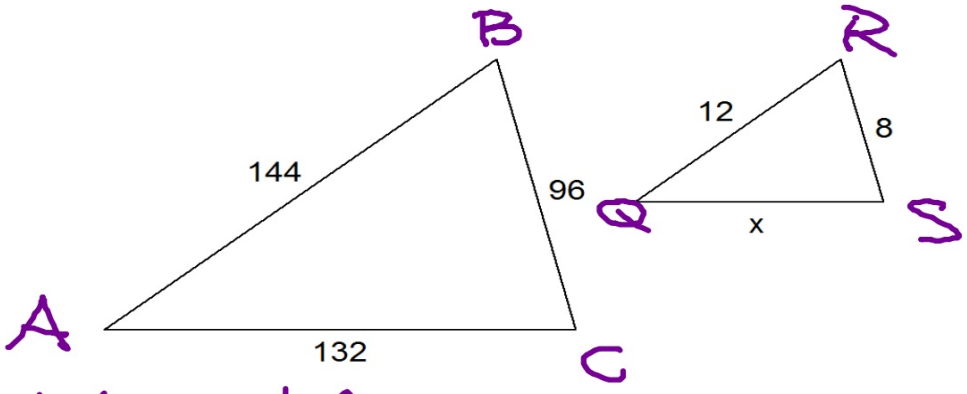
Give examples of two real-world objects whose shapes are similar.

square rug + a square napkin
flag inside + flag outside
game dice + fuzzy dice

Are two figures that have the same size and shape similar? Explain.

yes - it fits the new definition

**Label each pair of figures (start with A on the left figure and Q on the right figure) then list all of the corresponding angle similarities and the proportions of the sides.**




$\angle A = \angle Q$

$\angle B = \angle R$

$\angle C = \angle S$

$$\frac{AB}{QR} = \frac{BC}{RS} = \frac{AC}{QS}$$

# Homework

White Similarity WS1

Due Tuesday