February 27, 2012

M7R

Any homework to correct?

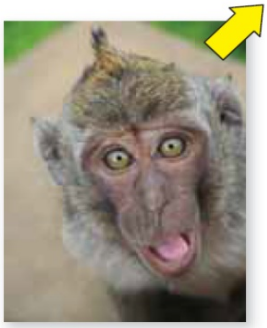
2/27 - Similar Figures

Similar means:
same proportions
different size

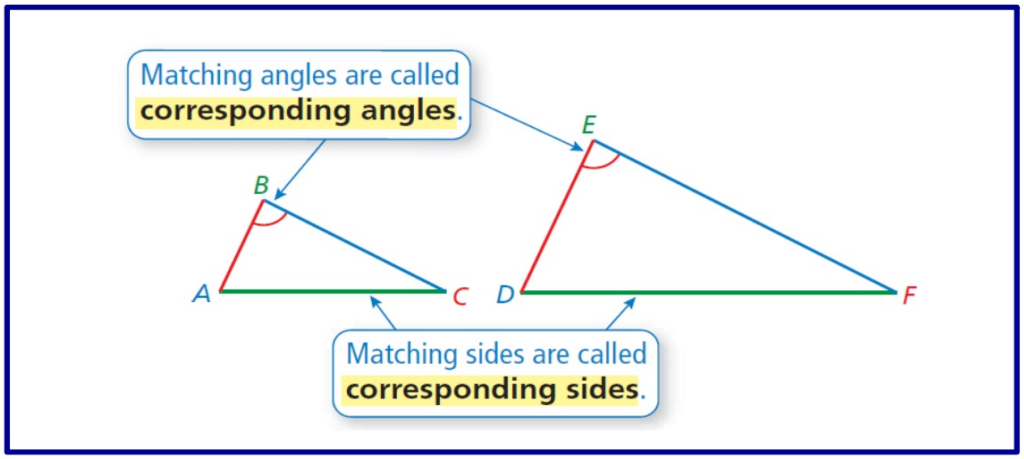
Original Photograph

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 $\angle Q$

$\angle C$ and $\angle R$

$\angle D$ and $\angle S$

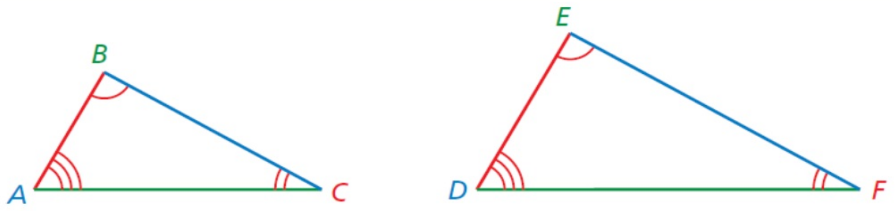
b. Corresponding sides:

$\overline{AB}$ and $\overline{PQ}$

$\overline{BC}$ and $\overline{QR}$

$\overline{CD}$ and $\overline{RS}$

$\overline{AD}$ and $\overline{PS}$



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

def. of similar

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

$\angle A = \angle D$

$\angle B = \angle E$

$\angle C = \angle F$

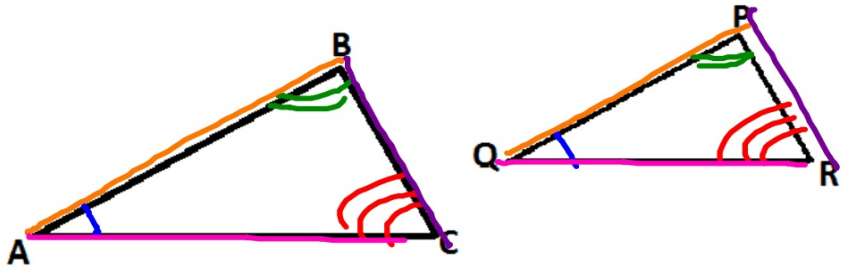
Discuss with your partner:

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

Flag in classroom and Flag by a stove
Square Calendar and square poster

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

List all corresponding angles using equations and corresponding sides using proportions.



$\angle A = \angle Q$

$\angle B = \angle P$

$\angle C = \angle R$

$$\frac{AB}{QP} = \frac{BC}{PR} = \frac{AC}{QR}$$

Homework

GOLD Similarity WS1

Due Tuesday