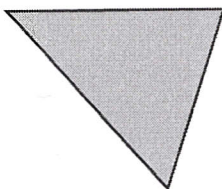
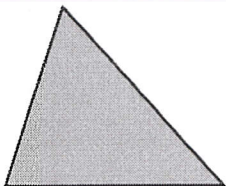


## 2.1 – Congruent Figures

- 1) Two figures are congruent when they have the same shape and the same size.
- 2) In two shapes, another name for *matching sides* is corresponding sides.
- 3) In two shapes, another name for *matching angles* is corresponding angles.

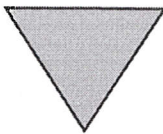
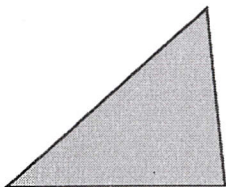
Tell whether the triangles are *congruent* or *not congruent*.

4)



*Congruent, but one is rotated*

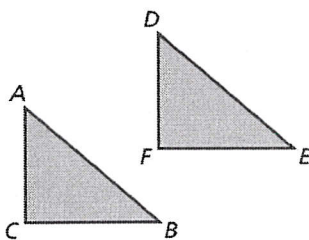
5)



*Not congruent.  
The one to the right is smaller than the one to the left.*

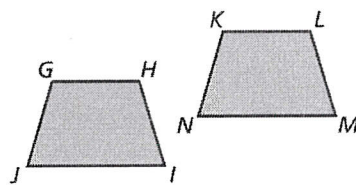
The figures are congruent. Name the corresponding angles and the corresponding sides.

6)



$$\begin{array}{ll} \angle A \cong \angle D & \overline{AC} \cong \overline{DF} \\ \angle C \cong \angle F & \overline{AB} \cong \overline{DE} \\ \angle B \cong \angle E & \overline{CB} \cong \overline{FE} \end{array}$$

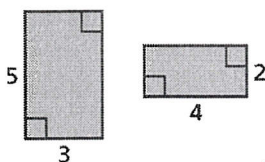
7)



$$\begin{array}{ll} \angle G \cong \angle K & \overline{GH} \cong \overline{KL} \\ \angle H \cong \angle L & \overline{HI} \cong \overline{LM} \\ \angle I \cong \angle M & \overline{IJ} \cong \overline{MN} \\ \angle J \cong \angle N & \overline{GJ} \cong \overline{KN} \end{array}$$

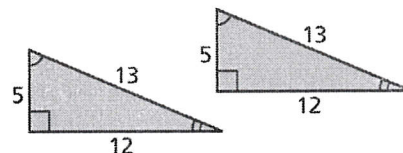
Tell whether the two figures are congruent. Explain your reasoning.

8)



*Not congruent, because corresponding sides are not congruent*

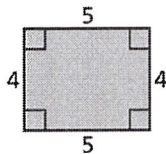
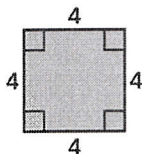
9)



*Yes. Both corresponding sides and angles are congruent.*

Describe and correct the error in telling whether the two figures are congruent.

10)



Both figures have four sides and corresponding angle measures are equal. So, they are congruent.

*The corresponding sides are not congruent. You would have to change the measurement of a pair of corresponding sides.*

11) The pentagons are congruent. Determine whether the statement is *true* or *false*. Explain your reasoning.

a)  $\angle B$  is congruent to  $\angle C$ .

*True. That symbol illustrates that the two angles are congruent.*

b) Side  $MN$  is congruent to side  $AE$ .

*False. They are not corresponding sides.*

c)  $\angle B$  corresponds to  $\angle O$ .

*False. They are neither corresponding nor congruent.*

d) Side  $BC$  is congruent to side  $PO$ .

*True. They are corresponding sides.*

e) The sum of the angle measures of  $LMNOP$  is  $540^\circ$ .

*True. The sum of all the angles is  $540^\circ$ .*

f) The measure of  $\angle B$  is  $120^\circ$ .

*False. It should be  $130^\circ$ .*

