

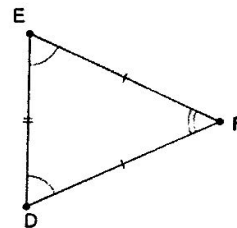
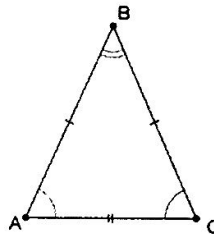
Geometry

2.1 Transformations

Name: MR BALLARD

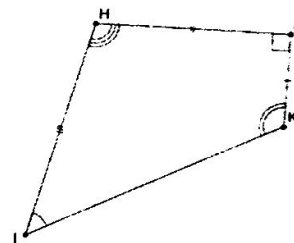
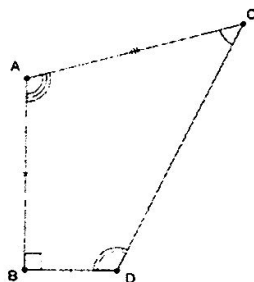
1. Name all the congruent pairs of sides and angles.

$$\begin{array}{ll} \angle A \cong \angle E & \overline{AB} \cong \overline{EF} \\ \angle C \cong \angle D & \overline{BC} \cong \overline{FD} \\ \angle B \cong \angle F & \overline{AC} \cong \overline{ED} \end{array}$$



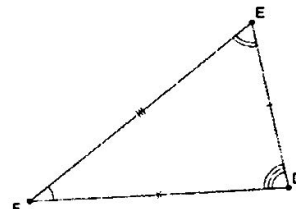
2. Write the congruence statement for the quadrilaterals below.

$$\square ABCD \cong \square HSKI$$



3. Write the congruence state for the triangles below.

$$\triangle ABC \cong \triangle DEF$$



4. A triangle was rotated and then flipped over. The resulting triangle is

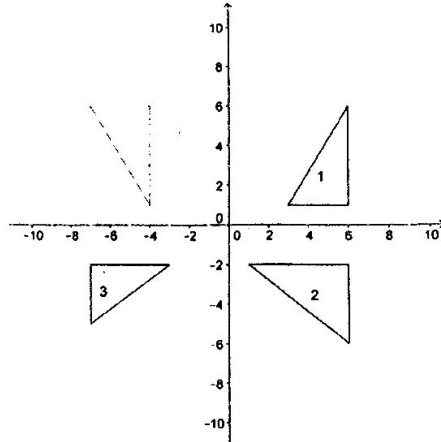
- ~~a. The same shape and larger than the original triangle.~~
- ~~b. A different shape and smaller than the original triangle.~~
- c. Congruent to the original triangle.
- ~~d. A different shape and the same size as the original triangle.~~

5. $\triangle ABC \cong \triangle ZYX$. If $m\angle A = 10^\circ$ and $m\angle B = 20^\circ$, what does $\angle X$ equal?

$$\angle X = 150^\circ$$

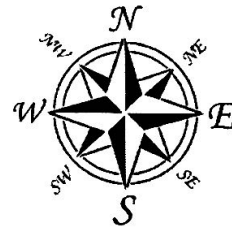
6. Which of the triangles (1, 2, or 3) can be obtained from the original red triangle (non-marked) through rigid motion? Explain why.

Δ All others change size

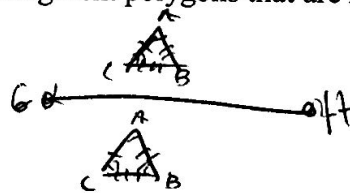
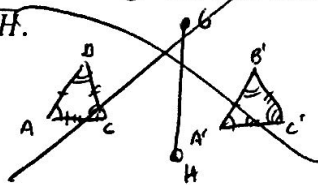


7. What type of rigid motion will result in the *N* of the compass rose continuing to point up but exchanging the locations of *E* and *W*?

reflection

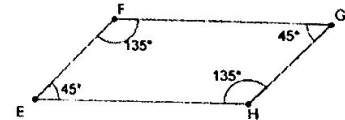
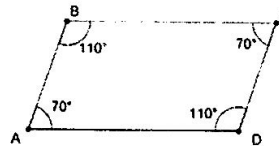


8. Draw a horizontal line segment \overline{GH} . Then, draw two congruent polygons that are reflections of each other over \overline{GH} .



9. Walter says the transformation that changed parallelogram ABCE to parallelogram EFGH is an example of rigid motion because all the sides stayed the same length. Is Walter correct? Why or why not?

NO, shape must stay the same and the angles changed.



10. ΔPDX has vertices located at $P(-2, 1)$, $D(-2, -2)$, and $X(2, -2)$. Graph ΔPDX . Then graph ΔSEA , which is congruent to ΔPDX , and state the coordinates of its vertices *S*, *E*, and *A*.

Varies

$S(2, 4)$ $E(2, 1)$ $A(6, 1)$

