

Handout 1: What's my Shape?

A set of cutout triangles is spread out on the table. Ask the students: "Can you put some of these together that are alike in some way? How are they alike? Can you put some together that are alike in a different way? How are they alike?"

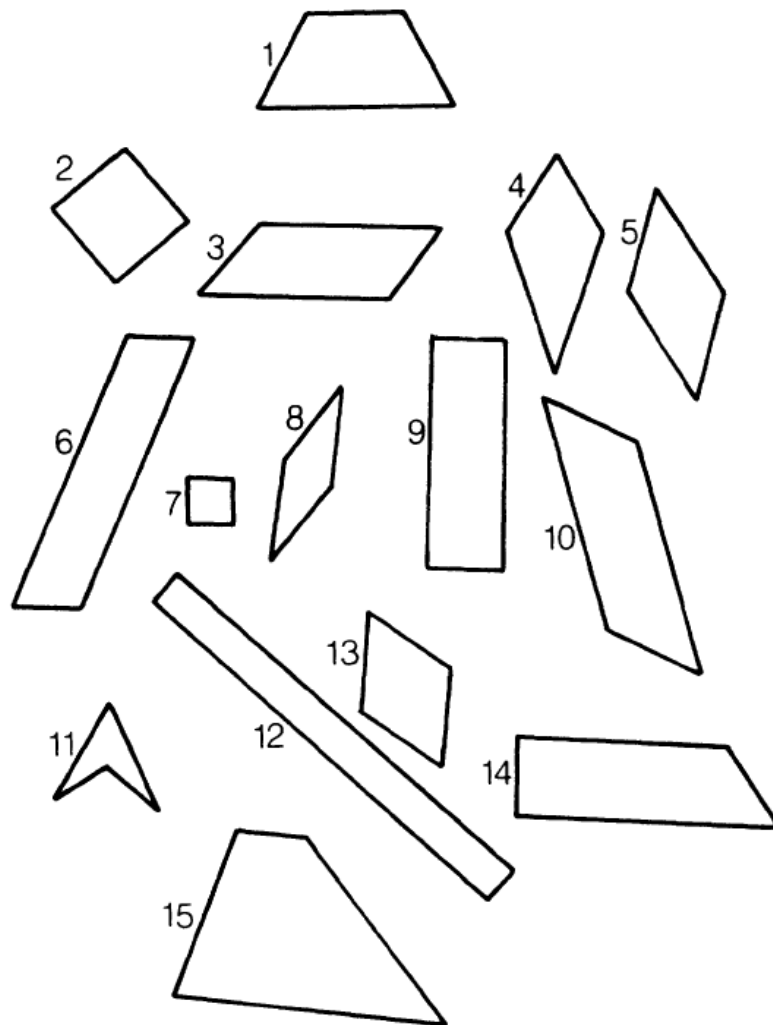


Figure 1. Quadrilaterals to be identified.

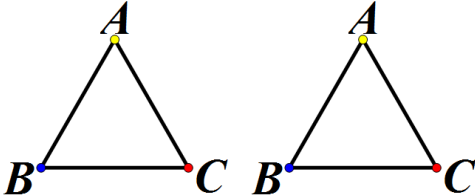
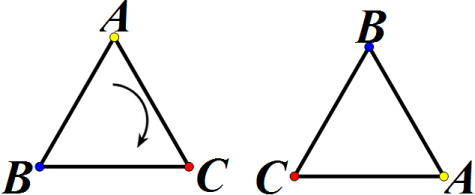
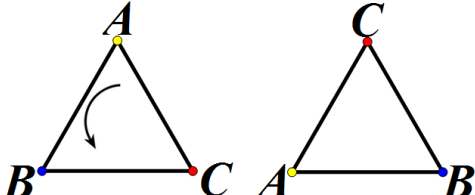
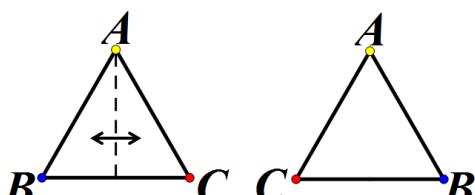
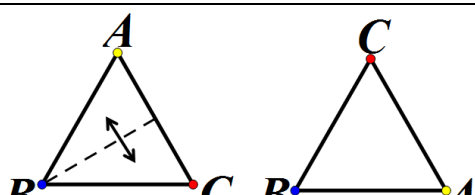
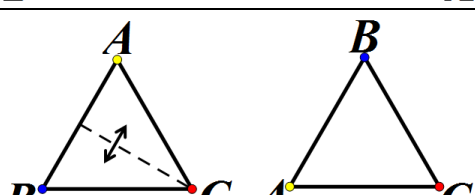
What's my shape?

- 1. It is a closed figure with 4 straight sides.**
- 2. It has 2 long sides and 2 short sides.**
- 3. The 2 long sides are the same length.**
- 4. The 2 short sides are the same length.**
- 5. One of the angles is larger than one of the other angles.**
- 6. Two of the angles are the same size.**
- 7. The other two angles are the same size.**
- 8. The 2 long sides are parallel.**
- 9. The 2 short sides are parallel.**

Source:

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Handout 2: Expressing symmetries in terms of F and R

Original symmetry	In terms of F and R
	
	
	
	
	
	

Note: Let F stand for a flip across the vertical axis and R stand for a 120° clockwise rotation.

Handout 3: Table of calculations

Note: Let F stand for a flip across the vertical axis and R stand for a 120° clockwise rotation.

Handout 4: Table of calculations (Revisited)

	<i>I</i>	<i>R</i>	R^2	<i>F</i>	<i>FR</i>	<i>RF</i>
<i>I</i>						
<i>R</i>						
R^2						
<i>F</i>						
<i>FR</i>						
<i>RF</i>						

Note: Let F stand for a flip across the vertical axis and R stand for a 120° clockwise rotation. Complete the table using only the list of rules you have made.