> **Quick Concept**: Symmetries found in polygons tell us a lot about their special properties. There are some powerful patterns in the symmetries of the quadrilaterals.

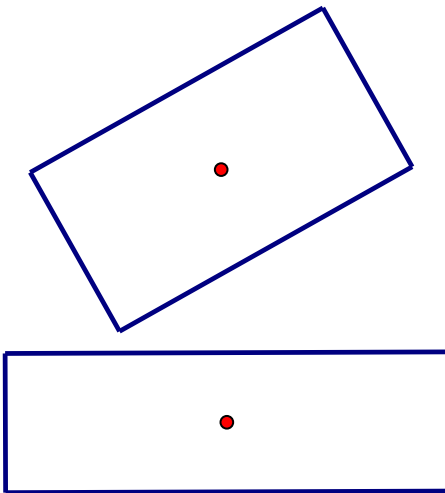1) **Trace the given quadrilaterals onto patty paper and investigate the symmetries.**

a) **PARALLELOGRAM**
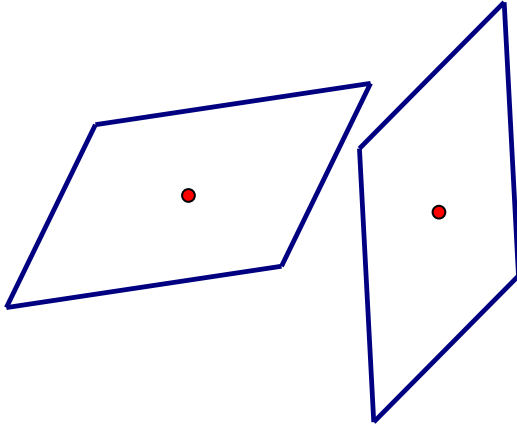
LINES OF SYMMETRY	
ROTATIONAL SYMMETRY ORDER	

What do these symmetries tell us about the properties of a parallelogram?

b) **RECTANGLE**

LINES OF SYMMETRY	
ROTATIONAL SYMMETRY ORDER	

What do these symmetries tell us about the properties of a rectangle?
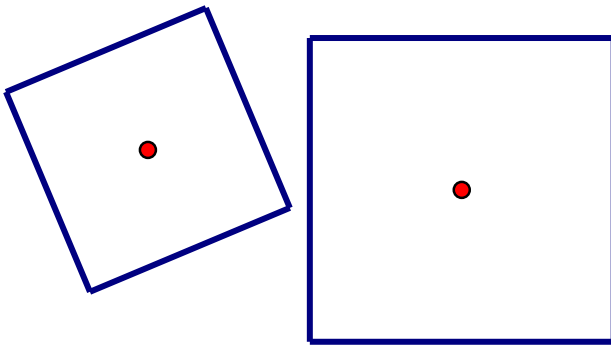
c) **RHOMBUS**
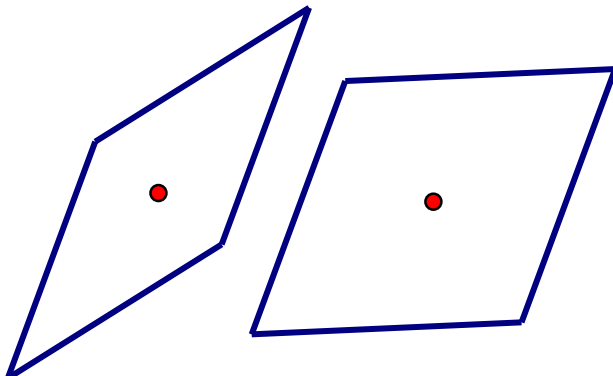
LINES OF SYMMETRY	
ROTATIONAL SYMMETRY ORDER	

What do these symmetries tell us about the properties of a rhombus?

d) <u>SQUARE</u>

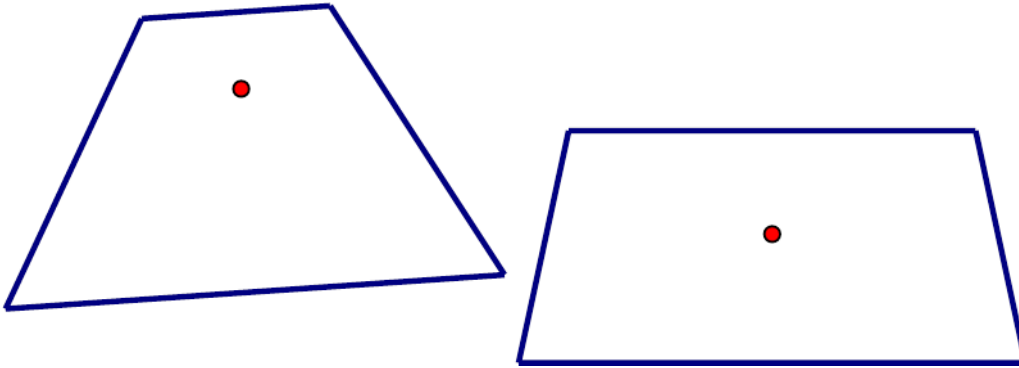| LINES OF SYMMETRY	
ROTATIONAL SYMMETRY ORDER	

What do these symmetries tell us about the properties of a square?

e) <u>ISOSCELES TRAPEZOID</u>

LINES OF SYMMETRY		ROTATIONAL SYMMETRY ORDER	

What do these symmetries tell us about the properties of an isosceles trapezoid?

f) <u>KITE</u>
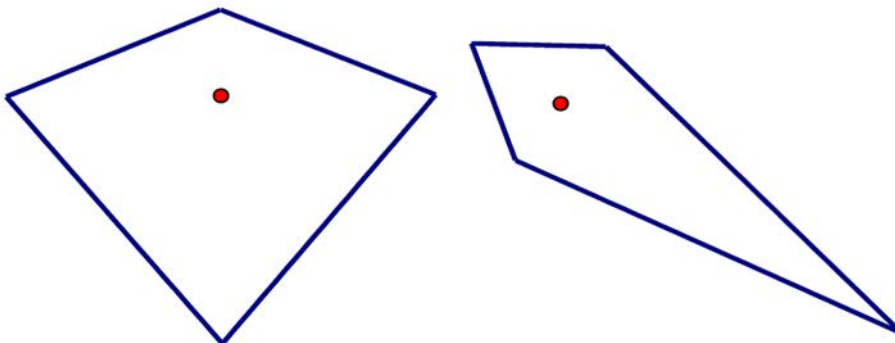
LINES OF SYMMETRY		ROTATIONAL SYMMETRY ORDER	

What do these symmetries tell us about the properties of a kite?

2) <u>SUMMARIES</u>

NO LINE SYMMETRY	1 LINE OF SYMMETRY	2 LINES OF SYMMETRY	4 LINES OF SYMMETRY

ROTATION ORDER 1	ROTATION ORDER 2	ROTATION ORDER 3	ROTATION ORDER 4

3) **What patterns are found in the symmetries of the quadrilaterals?**