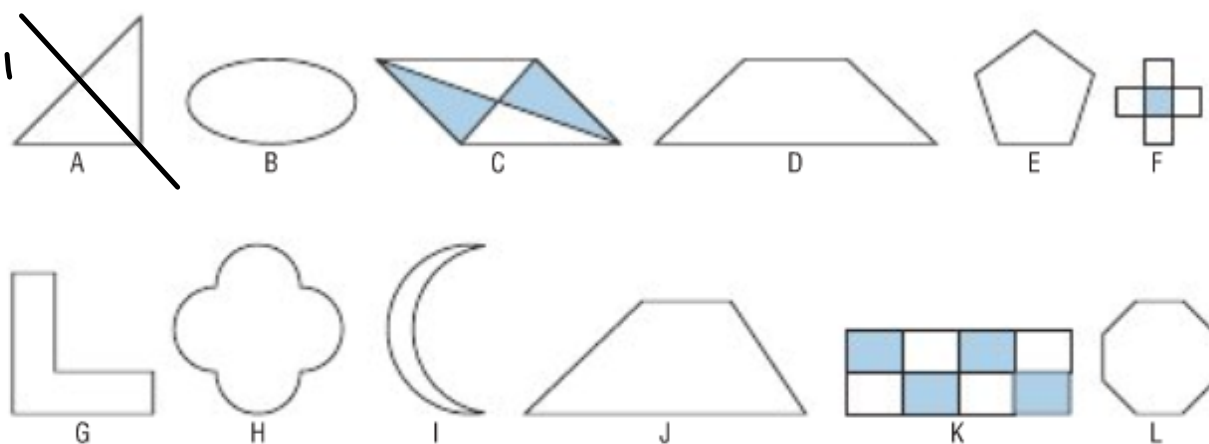




Section 7.5 Reflections and Line Symmetry



Your teacher will give you a large copy of the shapes below.

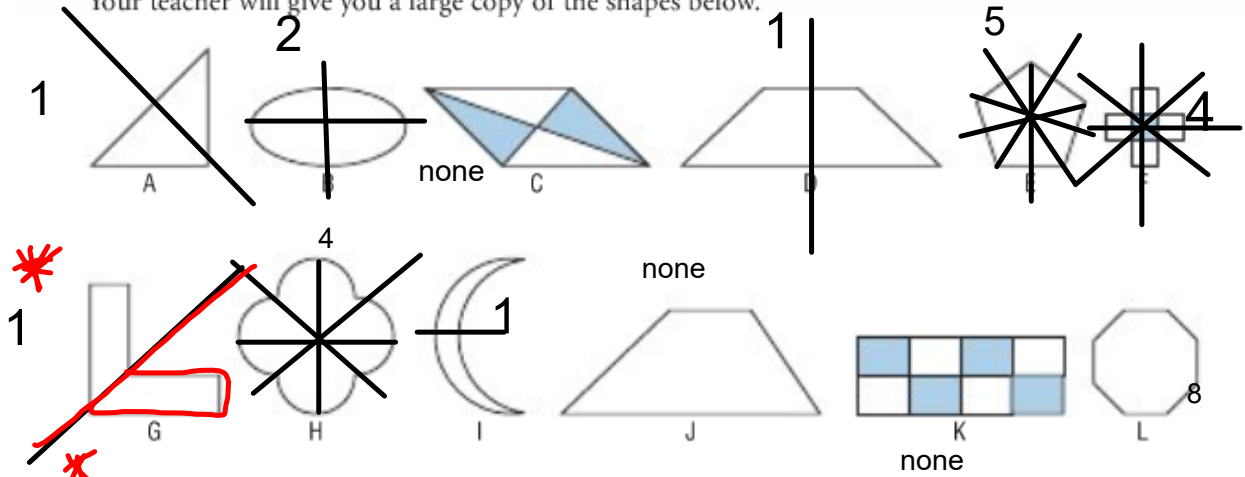


Which shapes have the same number of lines of symmetry?

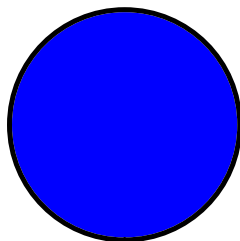
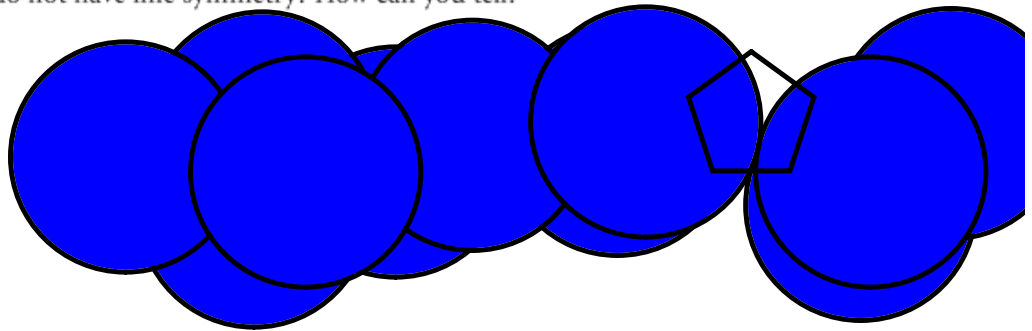
Sort the shapes according to the number of lines of symmetry they have.

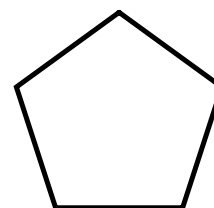
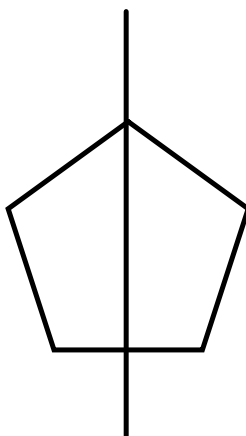
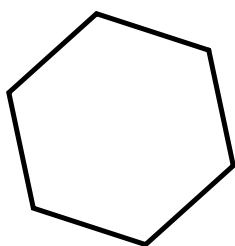
Which shapes do not have line symmetry? How can you tell?

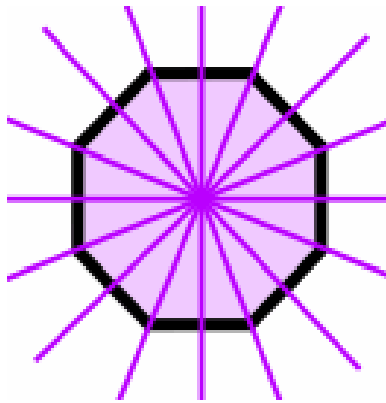
Your teacher will give you a large copy of the shapes below.



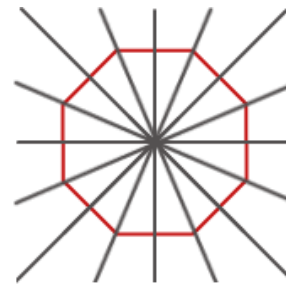
Which shapes have the same number of lines of symmetry?
 Sort the shapes according to the number of lines of symmetry they have.
 Which shapes do not have line symmetry? How can you tell?



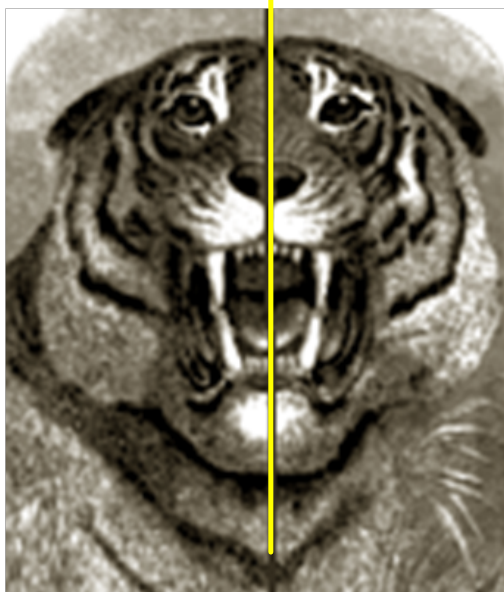




A **Regular Octagon** (8 sides)
has **8** Lines of Symmetry



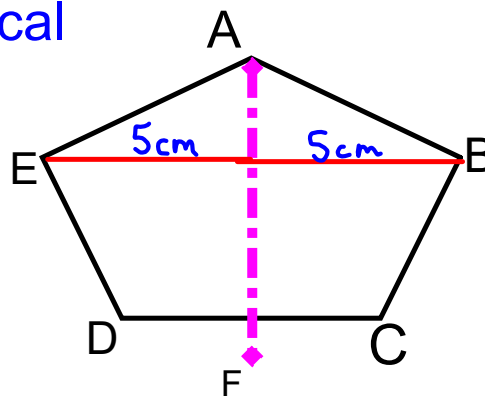
A ***line of symmetry*** is also known as a ***line of reflection***.



Polygon AFDE is CONGRUENT to polygon AFCB

- ↳ the same
- ↳ identical

Each point on one side of the *line of symmetry* has a corresponding point on the other side. These corresponding points are equal distance, *equidistant*, from the line of symmetry



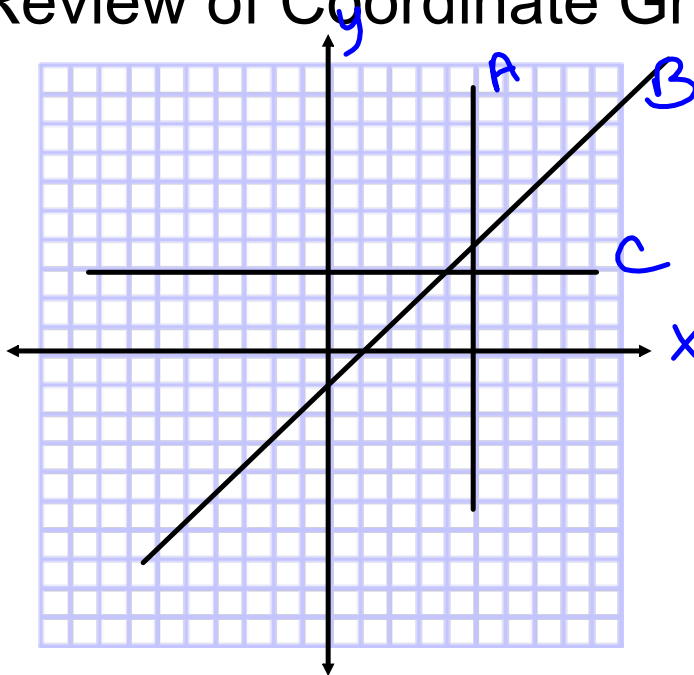
Not a regular pentagon

Quick Review of Coordinate Grid

oblique???

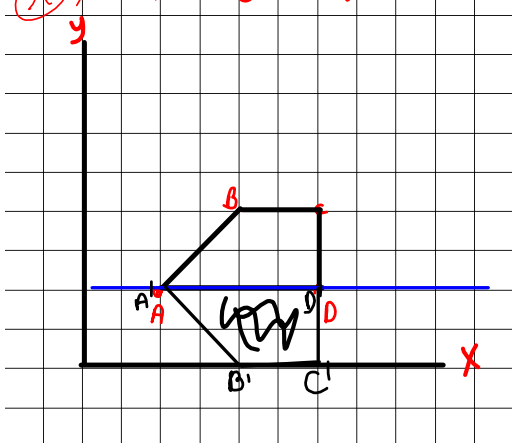
vertical???

horizontal???

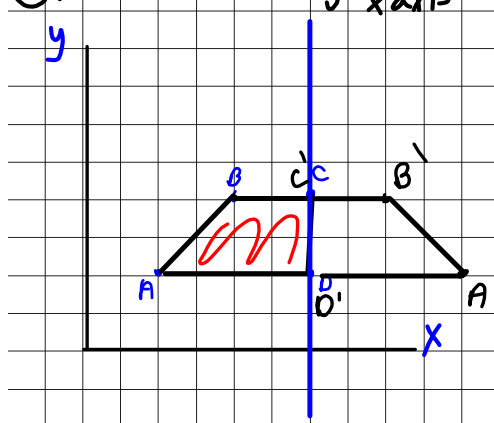


a reflection in an oblique line through $(0,0)$ and (b,b)

(A) A reflection through 2 on y axis

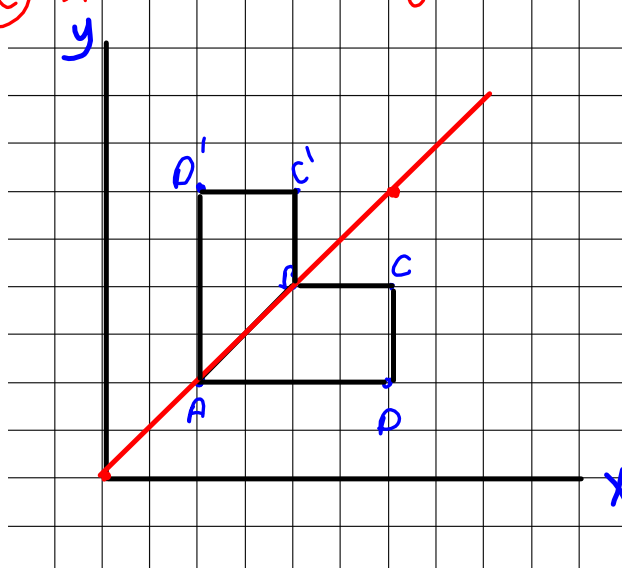


(B) A reflection through 6 on x axis



$A'(10,2)$

(C) A reflection through $(0,0)$ and (b,b)

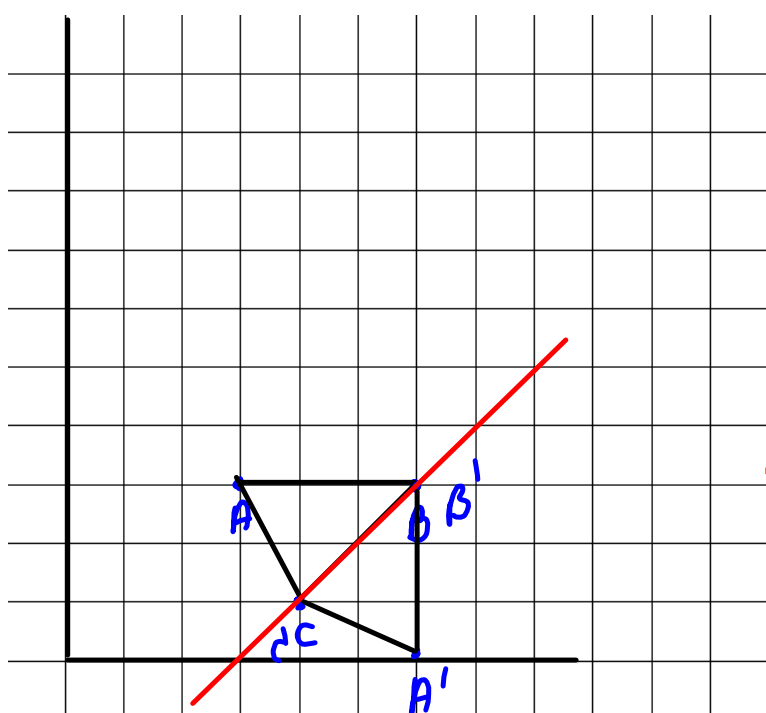


$D'(2,6)$

Plot A (3,3)

Plot B (6,3)

Plot C (4,1)

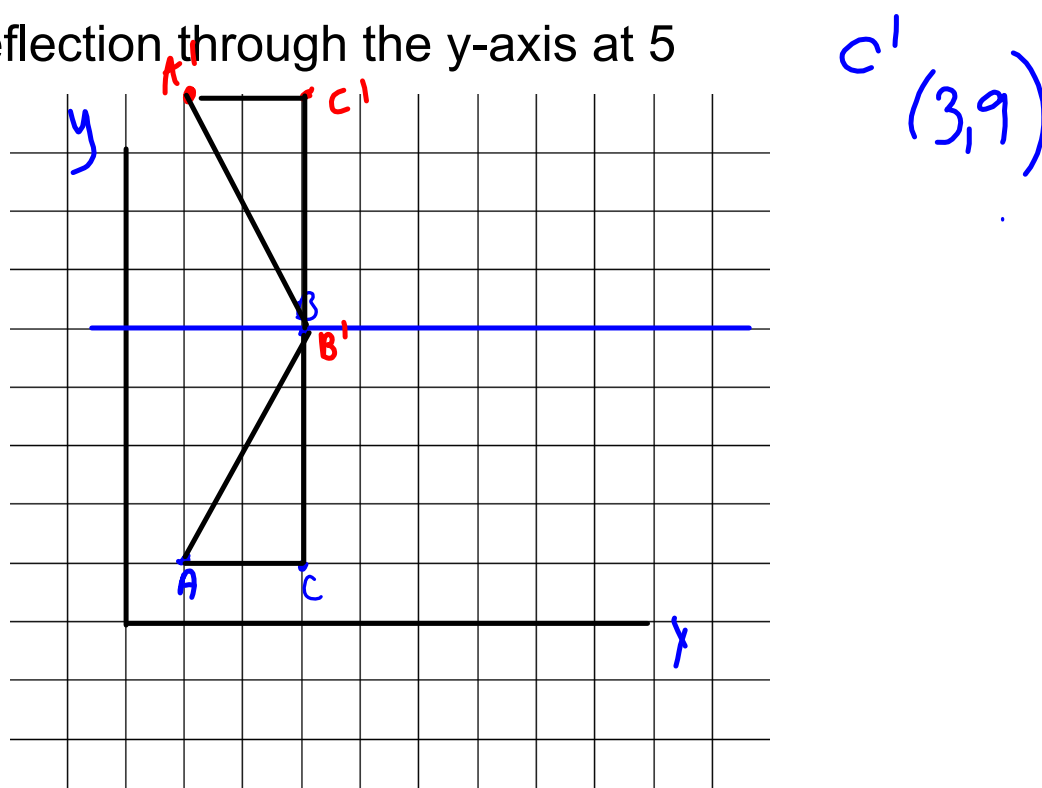


$A'(6,0)$

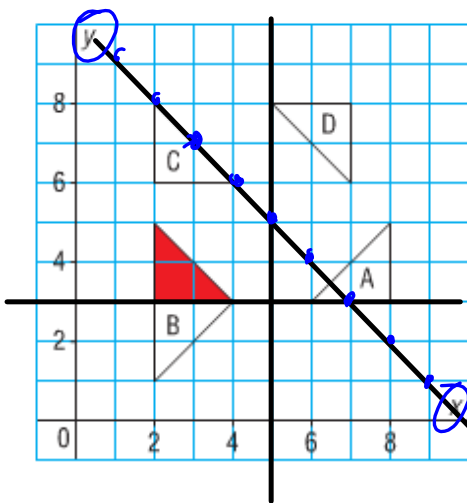
Draw a line of reflection through points (4,1) and (6,3)

Plot the following points: **A** (1,1), **B** (3,5) and **C** (3, 1)

Draw a reflection through the y-axis at 5



Identify the triangles that are related to the red triangle by a line of reflection.
Describe the position of each line of symmetry.



A is ~~is not~~ a reflection of the original triangle through 5 on the x axis

B is ~~is not~~ a reflection of the original triangle through the 3 on the y axis

C ~~is~~ is not a reflection....

D is ~~is not~~ a reflection through $(7, 3)$ and $(4, 6)$