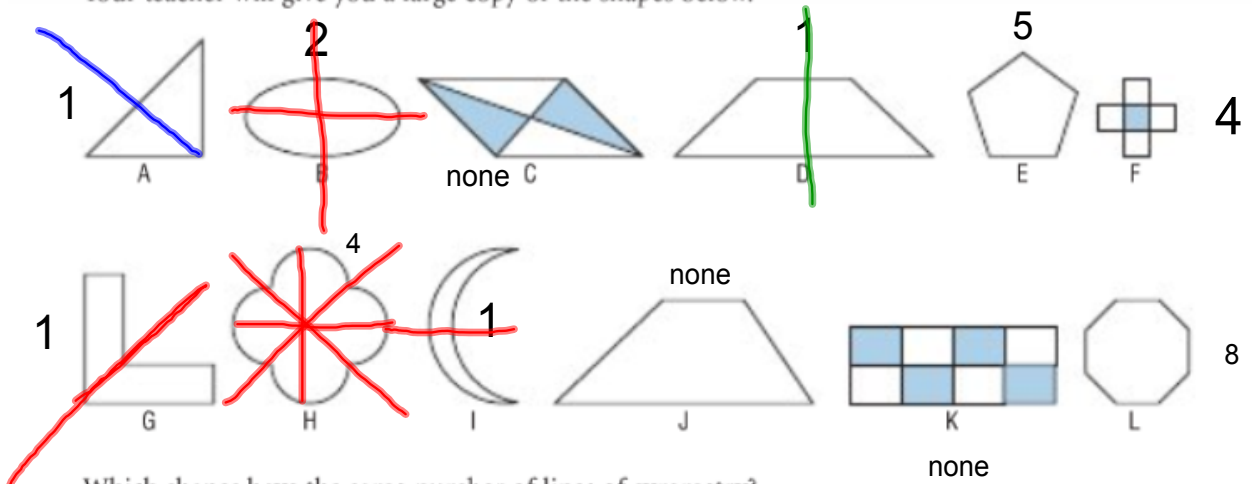


Section 7.5

Reflections and Line Symmetry



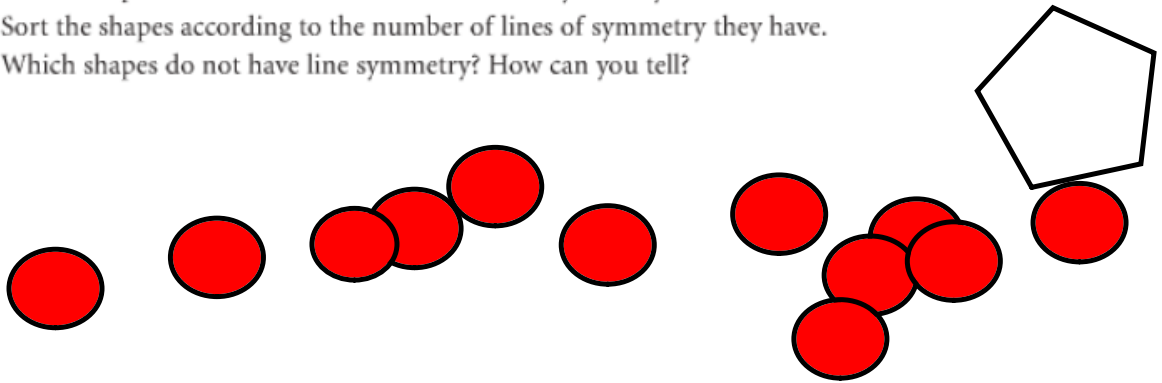
Your teacher will give you a large copy of the shapes below.



Which shapes have the same number of lines of symmetry?

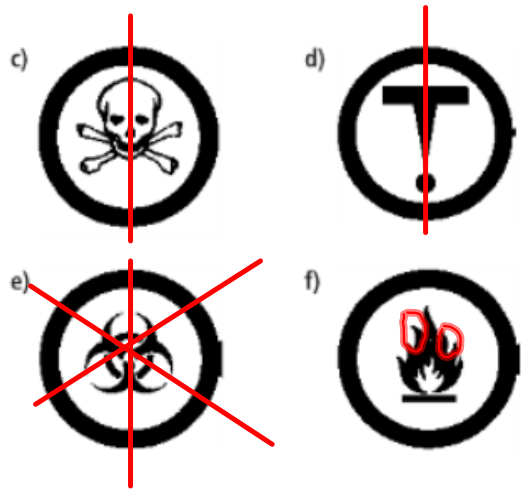
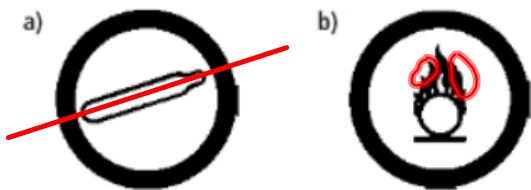
Sort the shapes according to the number of lines of symmetry they have.

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



Check

3. You may have seen these hazardous substance warning symbols in the science lab. Which symbols have line symmetry? How many lines of symmetry?

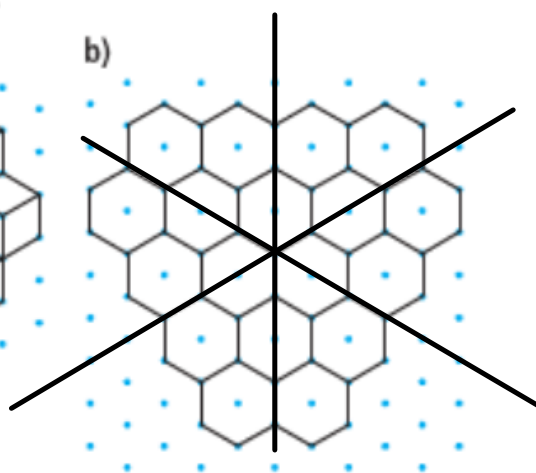


4. Identify the lines of symmetry in each tessellation.

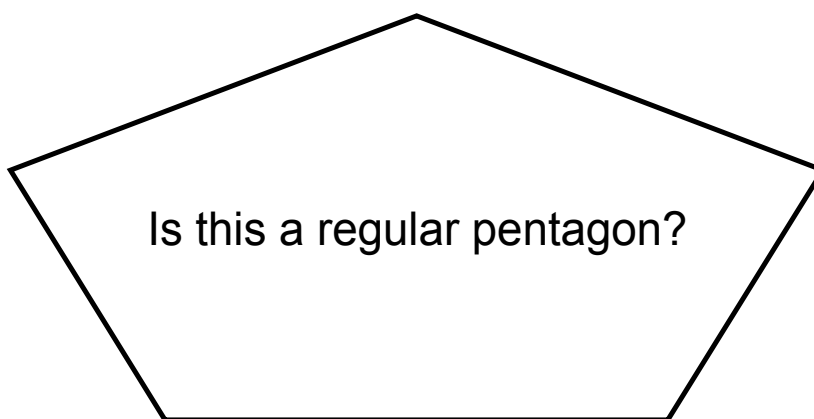
a)



b)



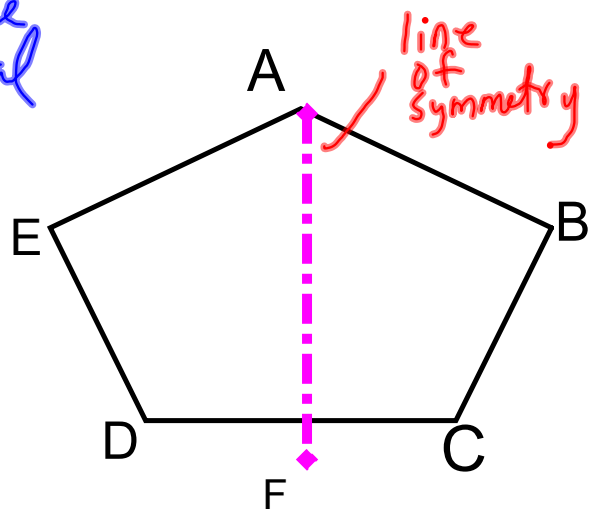
How many lines of symmetry does this pentagon have?



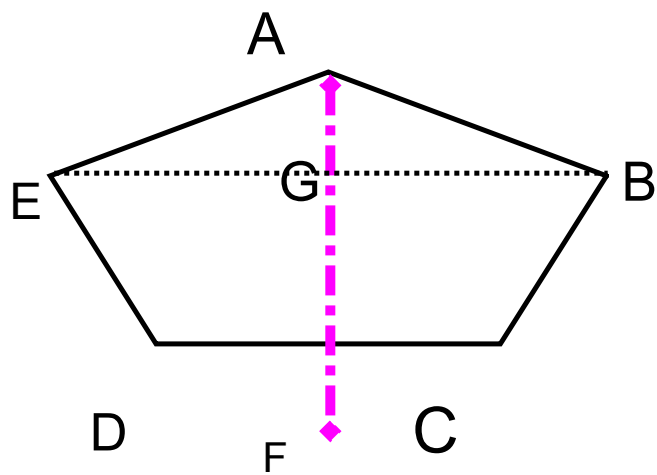
Polygon AFDE is CONGRUENT to polygon AFCB

↳ 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

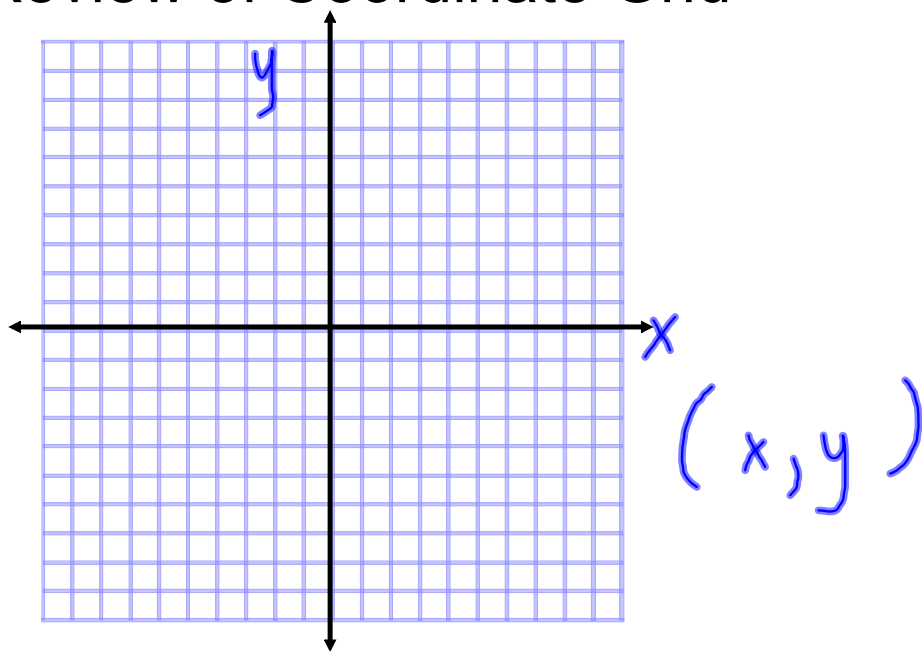


The distance from $EG =$ the distance
from BG

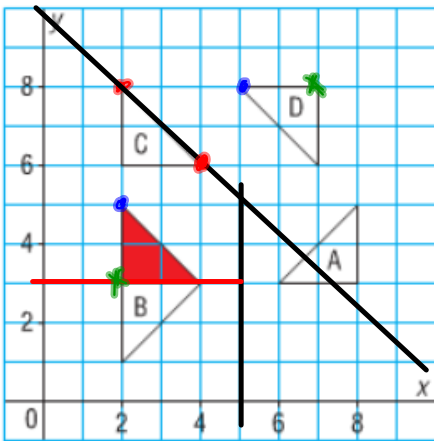
A **line of symmetry** is also known as a **line of reflection**.



Quick Review of Coordinate Grid



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

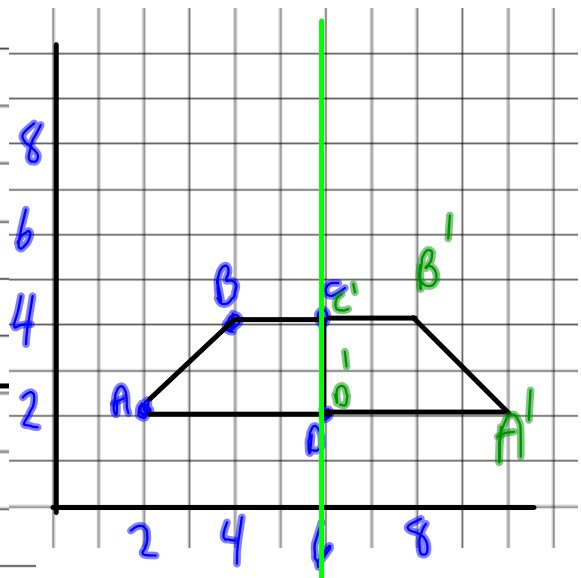
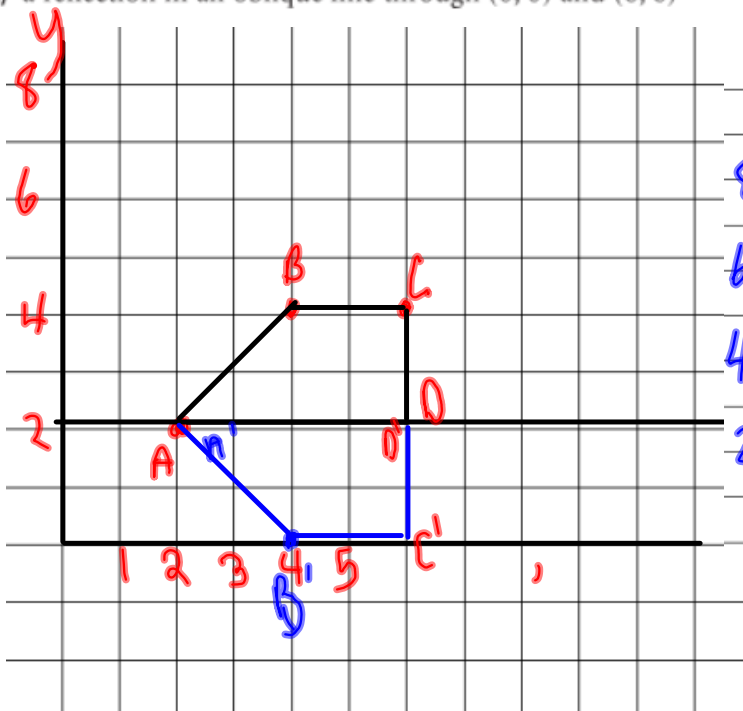
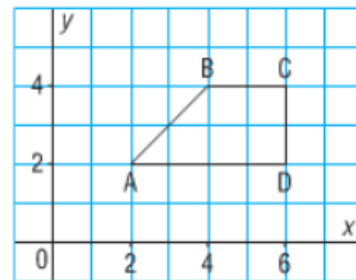
B ~~is~~ is not a reflection of the original triangle through the 3 on the y axis

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

D ~~is~~ is not a reflection through the points $(0, 10)$ and $(4, 6)$
 $(4, 6)$ and $(2, 8)$

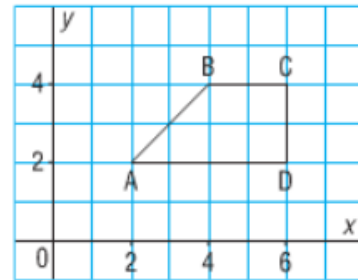
Quadrilateral ABCD is part of a larger shape.

- Draw the image of ABCD after each reflection below.
 - Write the coordinates of the larger shape formed by ABCD and its image.
 - Describe the larger shape and its symmetry.
- a reflection in the horizontal line through 2 on the y -axis
 - b) a reflection in the vertical line through ~~6~~ on the x -axis
 - c) a reflection in an oblique line through $(0, 0)$ and $(6, 6)$



Quadrilateral ABCD is part of a larger shape.

- Draw the image of ABCD after each reflection below.
- Write the coordinates of the larger shape formed by ABCD and its image.
- Describe the larger shape and its symmetry.



- a reflection in the horizontal line through 2 on the y -axis
- a reflection in the vertical line through 6 on the x -axis
- a reflection in an oblique line through $(0, 0)$ and $(6, 6)$

