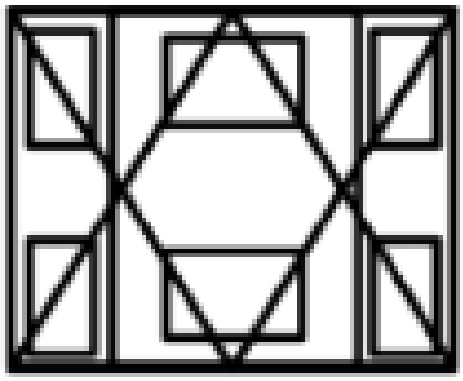
Regular and Irregular Polygons (Monday)

Always, sometimes or never true?

- A regular polygon has equal sides but not equal angles.
- A triangle is a regular polygon.
- A rhombus is a regular polygon.
- The number of angles is the same as the number of sides in any polygon.

How many regular and irregular polygons can you find in this picture?



Regular and Irregular Polygons ANSWERS

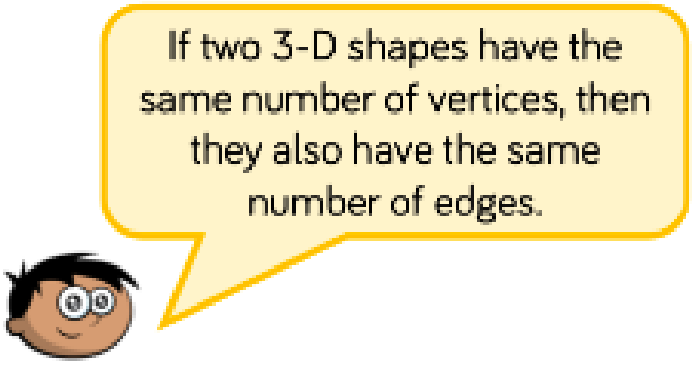
Always, sometimes or never true?

- A regular polygon has equal sides but not equal angles.
- A triangle is a regular polygon.
- A rhombus is a regular polygon.
- The number of angles is the same as the number of sides in any polygon.

- Never true – equal sides and equal angles.
- Sometimes true – equilateral triangles are, scalene are not.
- Sometimes true – if the rhombus has right angles and is a square.
- Always true.

Reasoning about 3D Shapes (Tuesday)

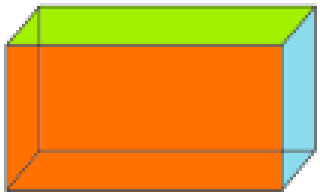
Amir says,

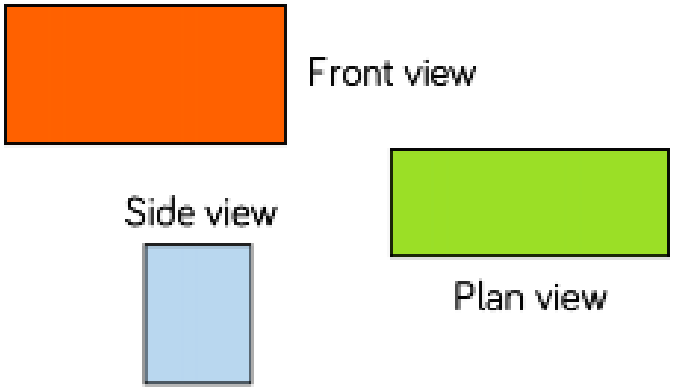


Do you agree?
Explain why.

Using different 3-D solids, how can you represent them from different views?
Work out which representation goes with which solid.

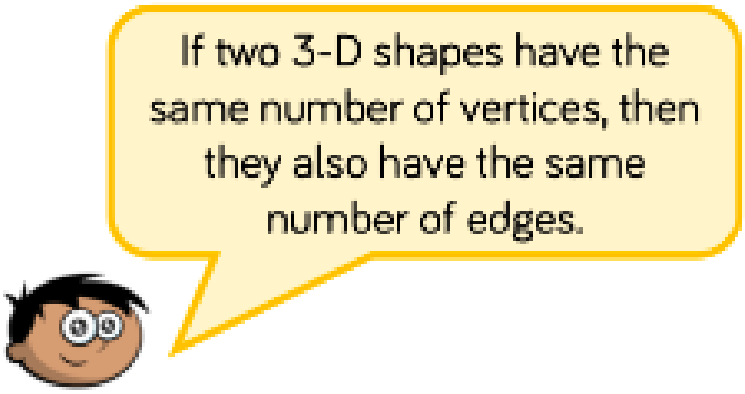
For example,





Reasoning about 3D Shapes ANSWERS

Amir says,



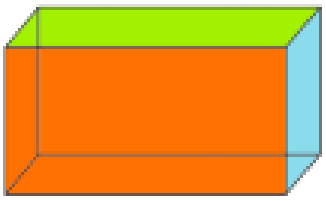
Do you agree?
Explain why.

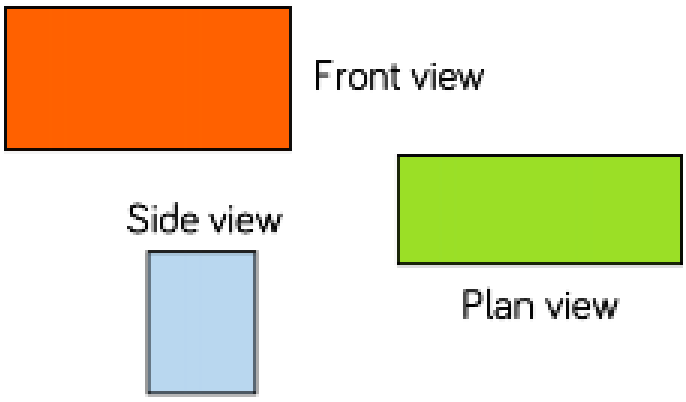
No e.g. a square-based pyramid and a triangular prism.

Children could investigate this and look for a pattern.

Using different 3-D solids, how can you represent them from different views? Work out which representation goes with which solid.

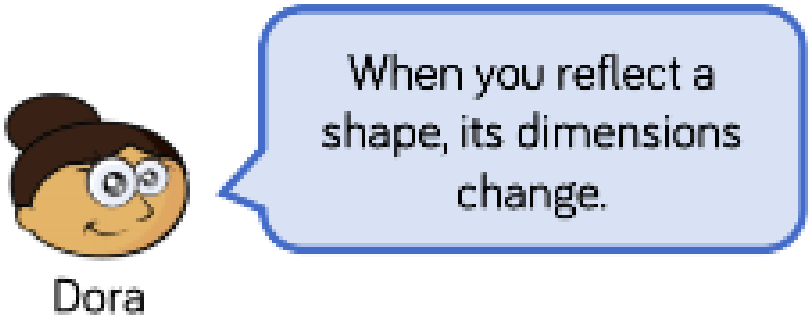
For example,



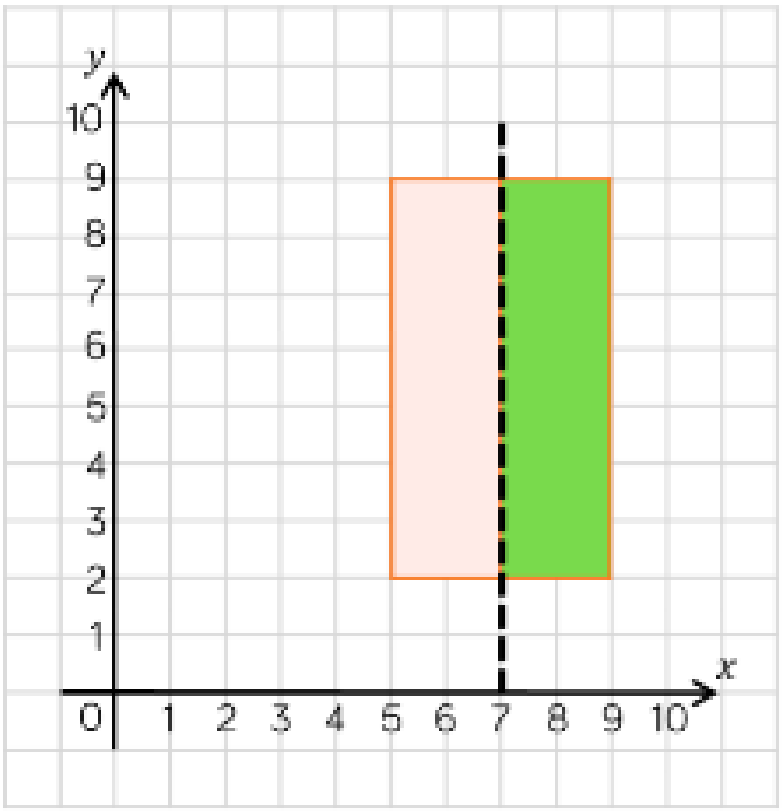


Children may explore a certain view for a prism and discover that it could always look like a cuboid or cube due to the rectilinear faces.

Reflection (Wednesday)

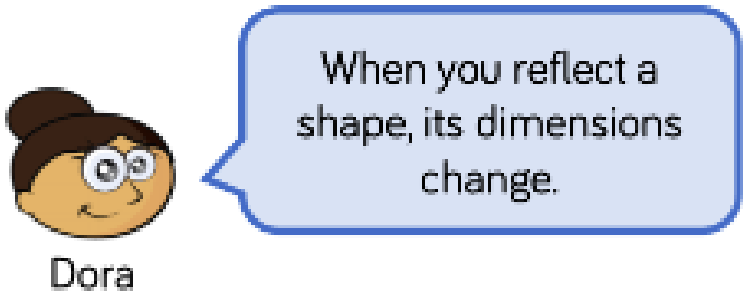


Do you agree with Dora?
Explain your thinking.



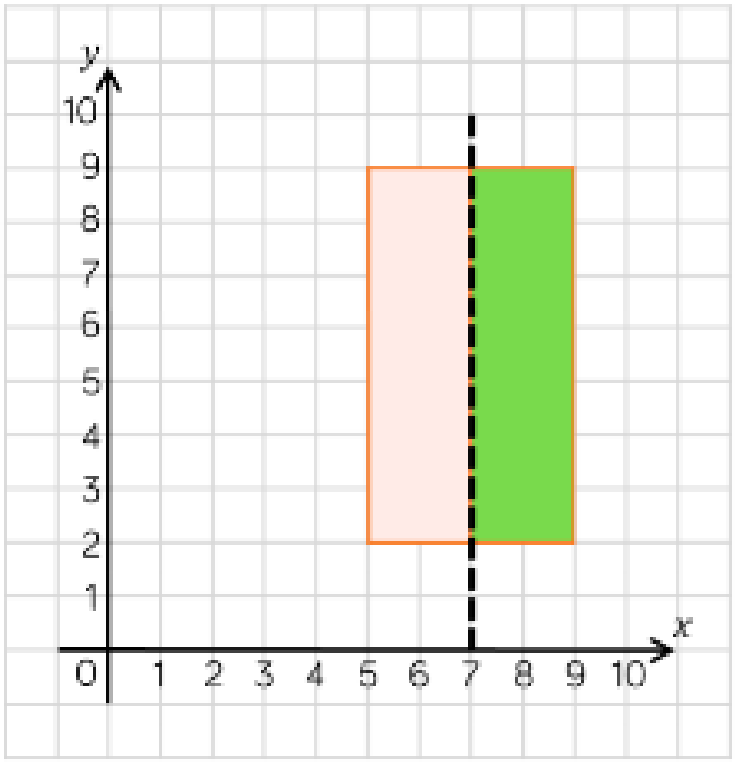
The rectangle is pink and green.
The rectangle is reflected in the mirror line.
What would its reflection look like?

Reflection ANSWERS



Do you agree with Dora?
Explain your thinking.

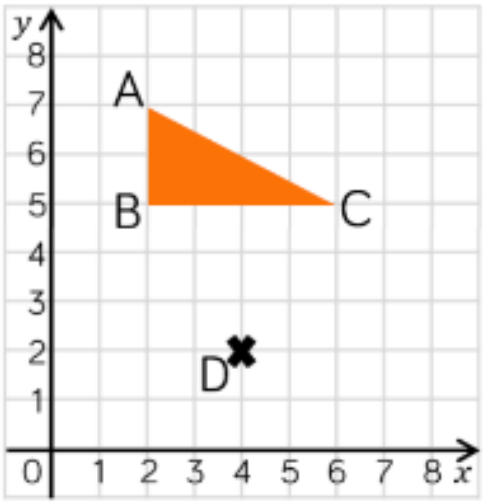
Dora is incorrect, the shape's dimensions do not change, only its position is changed.



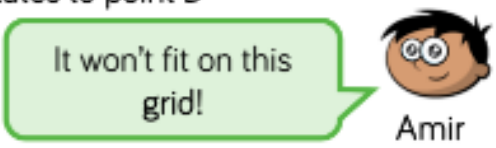
The rectangle is pink and green.
The rectangle is reflected in the mirror line.
What would its reflection look like?

The shape would remain in the same position, although the colours would be swapped – green on the left and pink on the right.

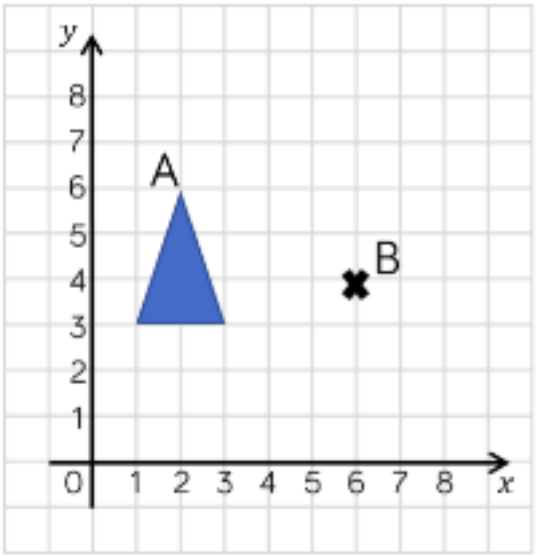
Translation (Friday)



Triangle ABC is translated so that point B translates to point D



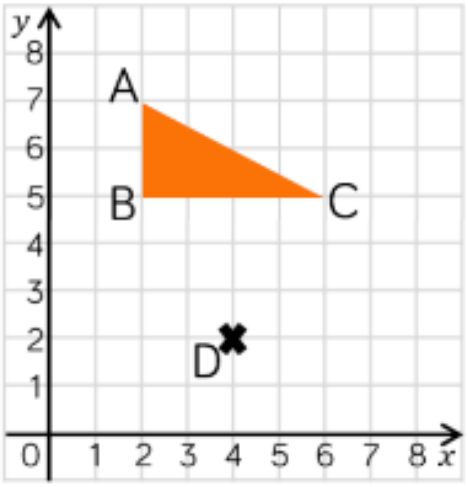
Do you agree with Amir?
Explain your thinking.



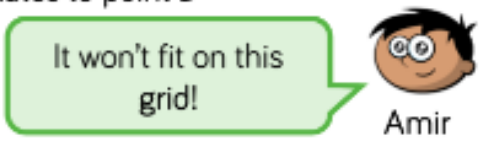
A triangle is drawn on the grid.
It is translated so that point A translates to point B.

What would be the coordinates of the other vertices of the translated triangle?

Translation ANSWERS

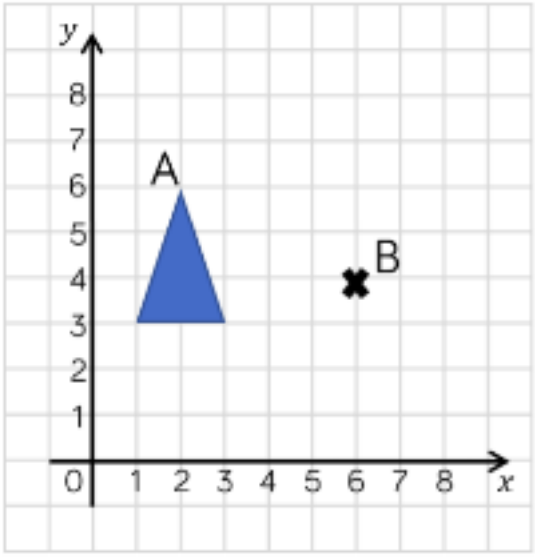


Triangle ABC is translated so that point B translates to point D



Do you agree with Amir?
Explain your thinking.

Amir is incorrect, the shape is translated two to the right and three down. It will fit on this grid.



A triangle is drawn on the grid.
It is translated so that point A translates to point B.

What would be the coordinates of the other vertices of the translated triangle?

(7, 1)

(5, 1)