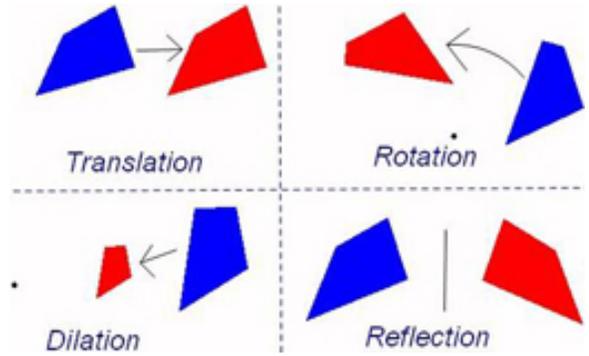


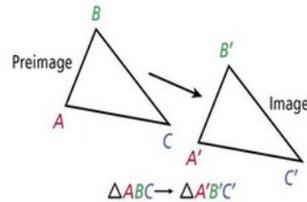
Geometry of Transformations

1. An image from a transformation cannot be congruent to the original figure.

- True
 False



2. Arrow notation (\rightarrow) is used to describe a transformation, and primes (') are used to label the image.

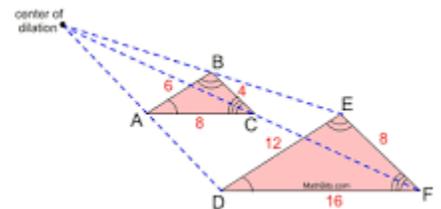


A translation arrow describes the translation of a figure on a coordinate grid.

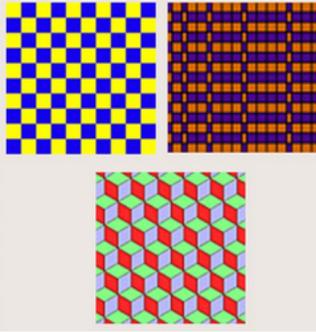
- True
 False

3. A DIALATION is a transformation that produces an image that is the same shape of the original, but is a different size.

- True
 False



4.



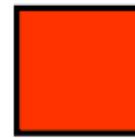
- A shape or tile that repeats to fill a surface without any gaps or overlaps.
- The name comes from the word *tessella*, the small square tile used in ancient Roman mosaics.

Another name for a mosaic is a tessellation.

- True
- False

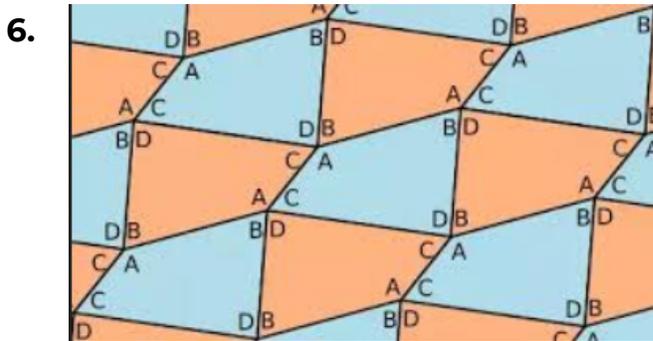
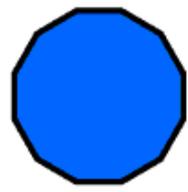
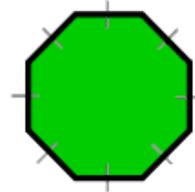
5. There are four types of regular figures that can tile a plane.

- True
- False



angles are equal

sides are equal



Any quadrilateral can be used to tile a plane.

- True
- False

7. Only an *equilateral* triangle can tile a plane.

- T True
 F False

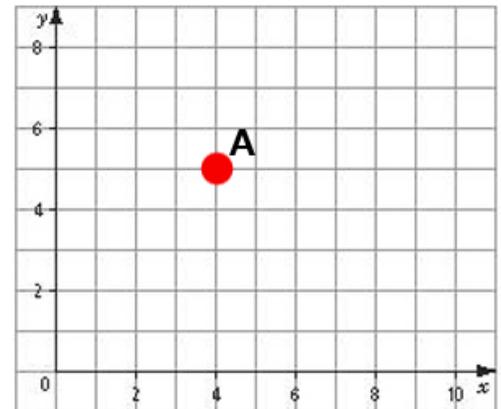
Tessellations
A tessellation is the tiling of a **plane** using one or more **geometric shapes**.
Any idea what a **plane** is?
What **geometric shapes** do you know?
In maths a **plane** refers to a flat surface. Examples of **geometric shapes** are squares, hexagons and triangles.
An important part of any **tessellation** is that there must be no gaps or overlapping shapes.

8. These capital letters have identical images after a reflection along a horizontal mirror line - B, C, D, E, H, I, L, K, O, R, X

- T True
 F False

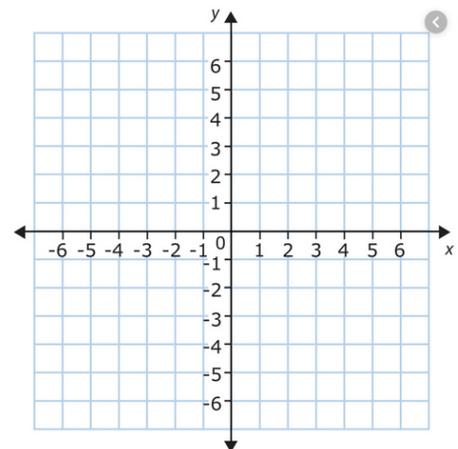
9. Point A(4,5) is translated 2 units left and 3 units up. What are the new coordinates of point A?

- A (2,8)
 B (6,8)
 C (2,2)
 D (6,2)



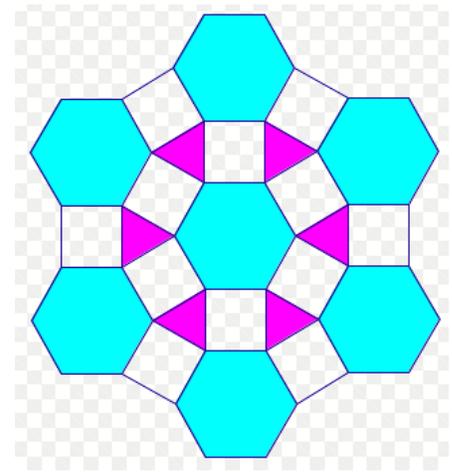
10. Point C(0,3) is translated 3 units right and 1 unit down. What are the new coordinates of point C?

- A (3,4)
 B (2,2)
 C (2,3)
 D (3,2)



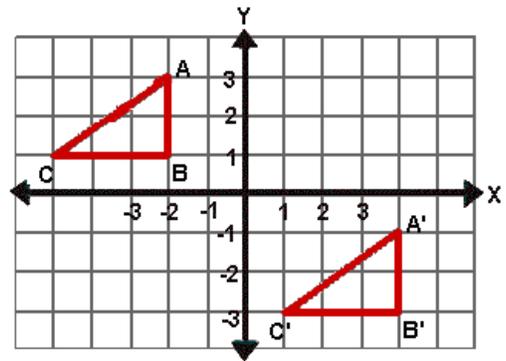
11. Which of the following shapes can be used to tile the plane?

- (A) hexagon
- (B) square
- (C) triangle
- (D) all of the above



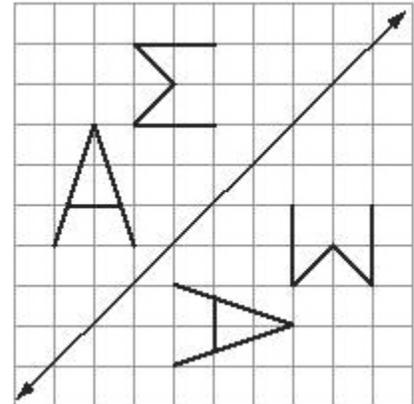
12. The type of transformation that moves figure ABC onto its image figure A'B'C' is a

- (A) dilation
- (B) rotation
- (C) reflection
- (D) translation



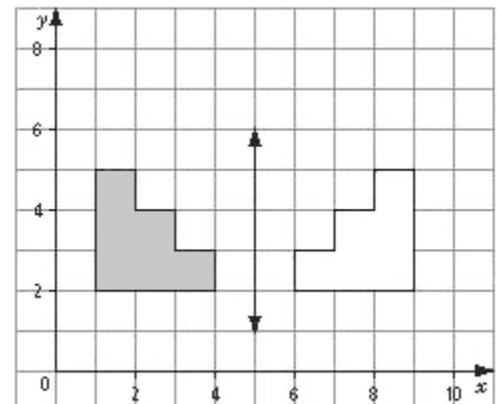
13. What transformation is being shown along the mirror line at 45°?

- (A) rotation
- (B) translation
- (C) reflection
- (D) none at all



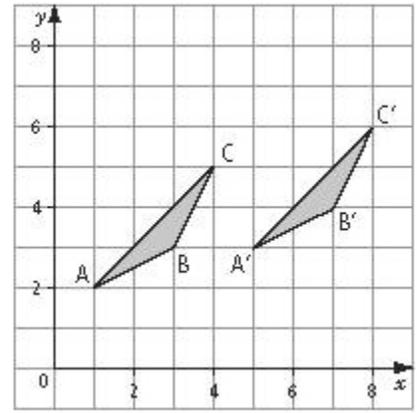
14. The following transformation is a

- (A) translation
- (B) reflection
- (C) rotation
- (D) It's not a transformation, just the steps to Farmer Brown's house.



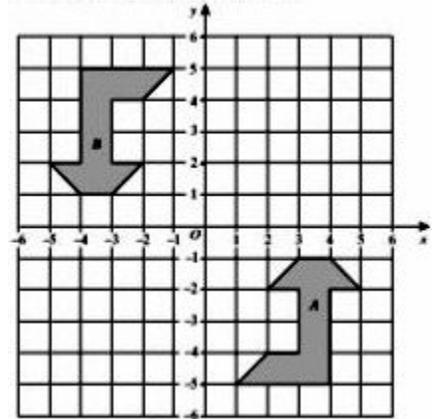
15. Describe the transformation that moves the figure onto its image.

- (A) The figure has been translated 2 units right and 2 unit up.
- (B) The figure has been translated 1 units right and 4 unit up.
- (C) The figure has been translated 3 units right and 1 unit up.
- (D) The figure has been translated 4 units right and 1 unit up.



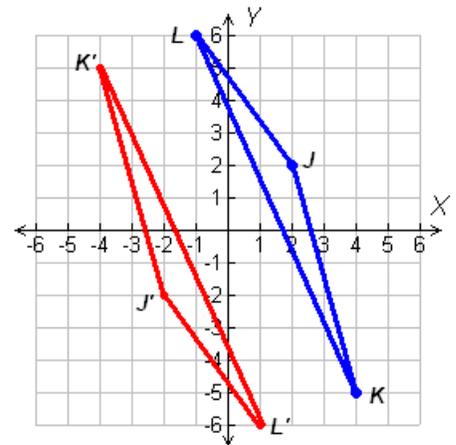
16. The figure below is a what type of transformation?

- (A) rotation of 90°
- (B) rotation of 180°
- (C) rotation of 150°
- (D) reflection



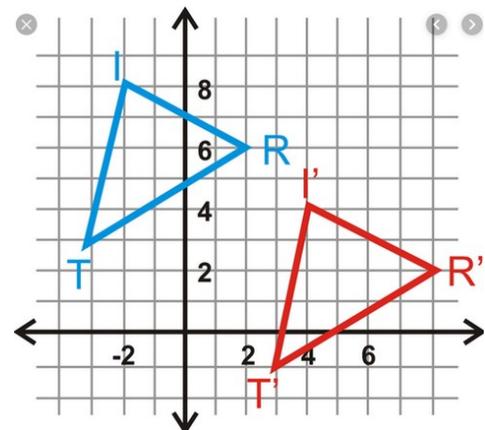
17. The following depicts which geometrical transformation of triangle JKL?

- (A) rotation
- (B) reflection
- (C) translation
- (D) dilation



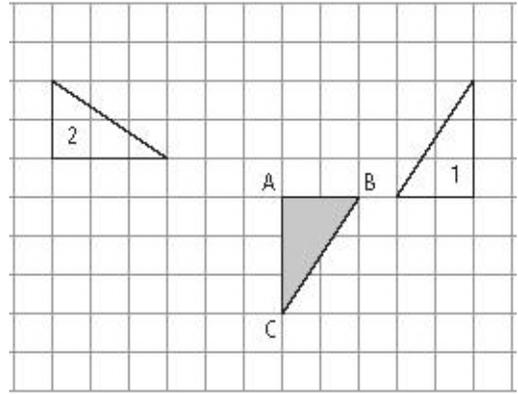
18. The transformation that is a SLIDE along a straight line is called:

- (A) translation
- (B) reflection
- (C) rotation
- (D) image



19. What transformation of the shaded triangle ABC is shown?

- (A) Figure 1 is the image of Triangle ABC after a translation of 3 to the right and 3 up.
- (B) Figure 1 is the image of Triangle ABC after a rotation of 270° .
- (C) Figure 1 is the image of Triangle ABC after a rotation of 180° .
- (D) Figure 1 is the image of Triangle ABC after a rotation of 90° .



20. What CAPITAL LETTER of the alphabet can be formed when joining the following points on a coordinate grid? A(3,5), B(5,5), C(7,5), D(5,3), E(5,1)

- (A) I
- (B) T
- (C) D
- (D) W

