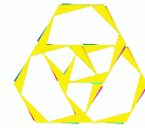




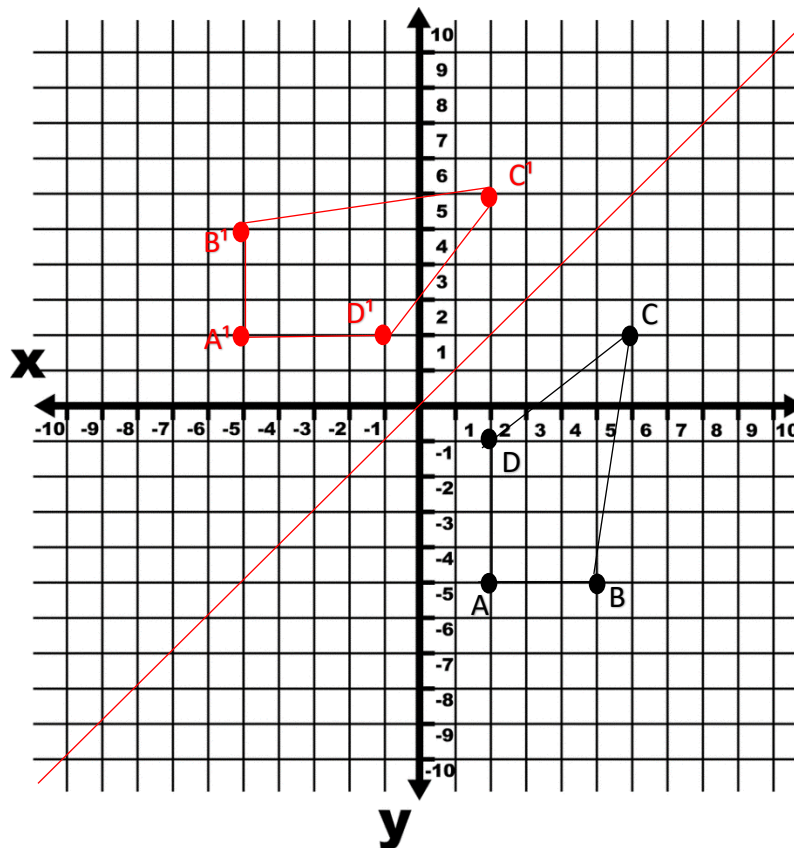
## Grade 9 - Mathematics

### Transformation Geometry 4



#### Memo

1. On the cartesian plane below, draw in the line  $y = x$



2. Look at the shape that has been plotted on the cartesian plane.

a. Give the co-ordinates for each vertex in the shape

**A (2; -5), B (5; -5), C (6; 2), D (2; -1)**

b. Reflect ABCD across the line  $y = x$  to give the quadrilateral  $A'B'C'D'$

c. Would you say that the two quadrilaterals are congruent? Give a reason.

**Yes, they are. Their sides are the same length and they both have an area of 17units**



# WorksheetCloud

3. On the cartesian plane below,
- draw in the line  $y = x$
  - plot the co-ordinates to form shape EFGHI, where E(3; -7), F(3; -4), G(5; -2), H(7; -4) and I(7; -7)
  - Reflect shape EFGHI across the line  $y = x$ .
  - Write down the co-ordinates for E'<sup>1</sup>F'<sup>1</sup>G'<sup>1</sup>H'<sup>1</sup>I'<sup>1</sup>.  
 $E^1(-7; 3)$ ,  $F^1(-4; 3)$ ,  $G^1(-2; 5)$ ,  $H^1(-4; 7)$ ,  $I^1(-7; 7)$
  - Are the two shapes congruent? Give a reason.  
Yes. All the corresponding sides are the same length. The areas of both shapes are 16 units

