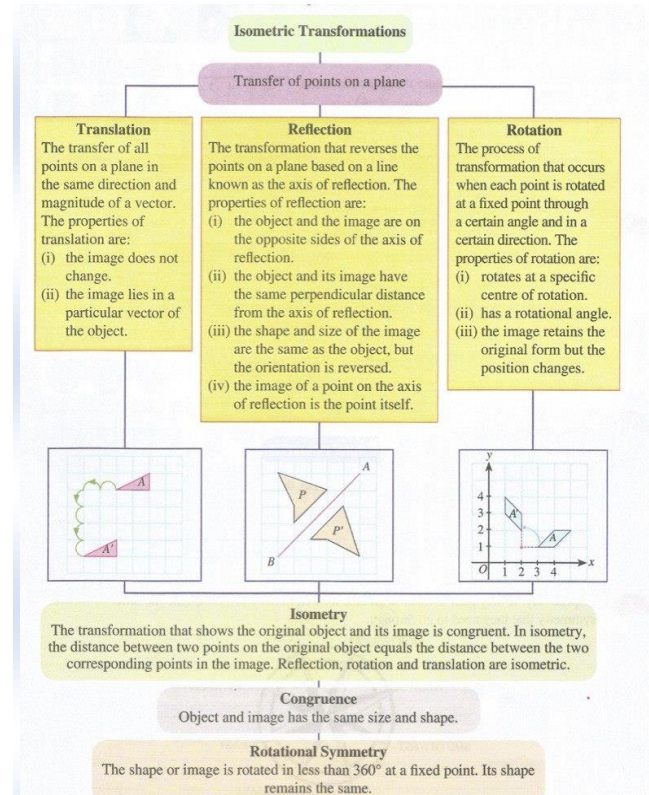
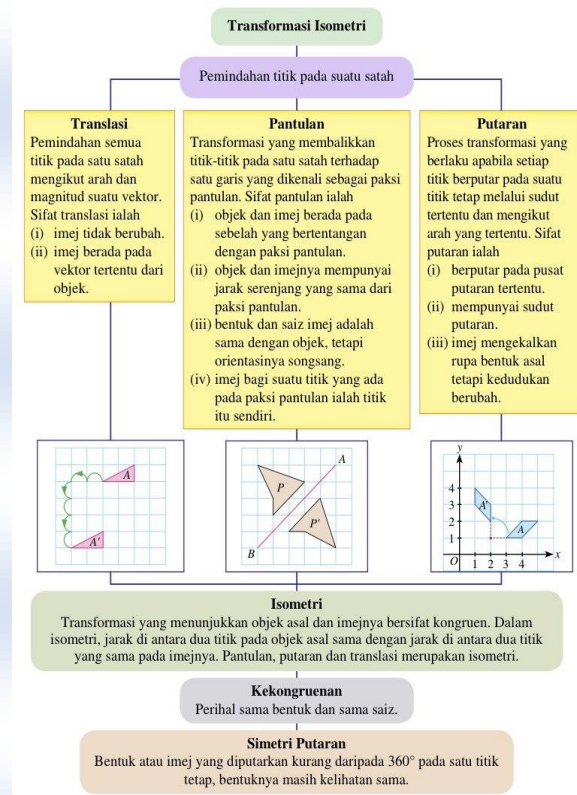


# 17. TRANSFORMASI

## Transformation

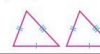


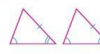


### NOTA RINGKAS



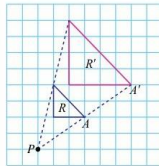
### Bentuk kongruen

- Mempunyai panjang sisi sepadan dan saiz sudut sepadan yang sama

### Kekongruenan segi tiga

<ul style="list-style-type: none"> <li>Sisi-Sisi-Sisi (SSS)</li> </ul> 	<ul style="list-style-type: none"> <li>Sisi-Sudut-Sisi (SAS)</li> </ul> 	<ul style="list-style-type: none"> <li>Sudut-Sisi-Sudut (ASA)</li> </ul> 
<ul style="list-style-type: none"> <li>Sudut-Sudut-Sisi (AAS)</li> </ul> 	<ul style="list-style-type: none"> <li>Sudut-Sudut-Sudut (AAA)</li> </ul> <p>Luas mesti sama</p> 	<ul style="list-style-type: none"> <li>Sisi-Sisi-Sudut (SSA)</li> </ul> <p>Luas mesti sama</p> 

### Pembesaran









- Objek dan imej adalah serupa
- Faktor skala,  $k = \frac{PA'}{PA}$
- Luas imej  $= k^2 \times \text{Luas objek}$

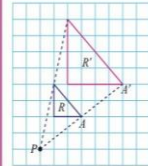
### Congruent shapes

- The corresponding sides and angles are of the same sizes.

### Triangle congruency

<ul style="list-style-type: none"> <li>Side-Side-Side (SSS)</li> </ul> 	<ul style="list-style-type: none"> <li>Side-Angle-Side (SAS)</li> </ul> 	<ul style="list-style-type: none"> <li>Angle-Side-Angle (ASA)</li> </ul> 
<ul style="list-style-type: none"> <li>Angle-Angle-Side (AAS)</li> </ul> 	<ul style="list-style-type: none"> <li>Angle-Angle-Angle (AAA)</li> </ul> <p>Area must be equal</p> 	<ul style="list-style-type: none"> <li>Side-Side-Angle (SSA)</li> </ul> <p>Area must be equal</p> 

### Enlargement



- Object and image are similar
- Scale factor,  $k = \frac{PA'}{PA}$
- Area of image  $= k^2 \times \text{Area of object}$

### Gabungan transformasi

- Gabungan transformasi AB bermaksud transformasi B diikuti transformasi A

Untuk menentukan imej daripada objek di bawah transformasi AB, ikut tertib transformasi B diikuti transformasi A.

Untuk menentukan objek daripada imej, tertib transformasi dipertimbangkan secara songsang dengan tertib menentukan imej di bawah gabungan transformasi yang sama.

### Combined transformation

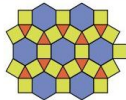
- Combined transformation AB means transformation B followed by transformation A

To determine image from object under transformation AB, the order is transformation B followed by transformation A.

To determine object from image, the order of transformations is reversed to determine the image under the same combined transformation.

### Teselasi

- Teselasi ialah pola bagi bentuk berulang yang memenuhi suatu satah tanpa ruang kosong atau pertindihan
- Teselasi dapat direka daripada transformasi isometri



### Tessellation

- Tessellation is a pattern of recurring shapes that fills a plane without leaving empty spaces or overlapping
- Tessellation can be designed from an isometric transformation

