

Penyelesaian Lengkap

PRAKTIS 11

Bahagian A

- Satu pantulan.
A reflection.
Jawapan/Answer: A
- Suatu putaran 90° ikut arah jam pada pusat T .
A clockwise rotation of 90° about the centre T .
Jawapan/Answer: D
- Kekongruenan bermaksud bentuk dan saiz yang sama.
Congruence means same shape and size.
Jawapan/Answer: B

$$4 \quad P + \begin{pmatrix} -4 \\ 3 \end{pmatrix} = \begin{pmatrix} 4 \\ -2 \end{pmatrix}$$

$$P = \begin{pmatrix} 4 \\ -2 \end{pmatrix} - \begin{pmatrix} -4 \\ 3 \end{pmatrix}$$

$$= \begin{pmatrix} 4 + 4 \\ -2 - 3 \end{pmatrix}$$

$$= \begin{pmatrix} 8 \\ -5 \end{pmatrix}$$

Titik P /Point $P = (8, -5)$

Jawapan/Answer: C

$$5 \quad \begin{pmatrix} x \\ y \end{pmatrix} + \begin{pmatrix} 2 \\ 5 \end{pmatrix} = \begin{pmatrix} -2 \\ 8 \end{pmatrix}$$

$$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} -2 \\ 8 \end{pmatrix} - \begin{pmatrix} 2 \\ 5 \end{pmatrix}$$

$$= \begin{pmatrix} -4 \\ 3 \end{pmatrix}$$

$$\begin{pmatrix} -4 \\ 3 \end{pmatrix} + \begin{pmatrix} -3 \\ 2 \end{pmatrix} = \begin{pmatrix} -7 \\ 5 \end{pmatrix}$$

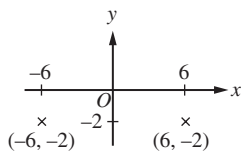
Imej/Image = $(-7, 5)$

Jawapan/Answer: A

$$6 \quad \text{Translasi/Translation} = \begin{pmatrix} 3 \\ -2 \end{pmatrix}$$

Jawapan/Answer: B

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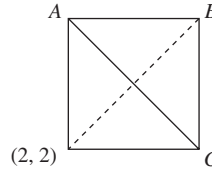
Imej/Image = $(-6, -2)$

Jawapan/Answer: C

- B tidak mempunyai sisi bersongsang.
 B does not have inverted sides.

Jawapan/Answer: B

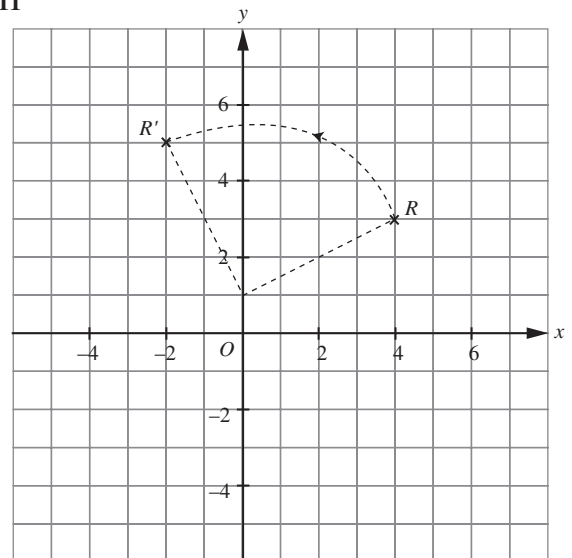
9



Jawapan/Answer: A

- Jarak M ke paksi- x = Jarak D ke paksi- x
Distance of M to x -axis = Distance of D to x -axis
Jawapan/Answer: D

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Jawapan/Answer: D

- Jawapan/Answer: C

- Di bawah satu transformasi isometri, bentuk dan saiz objek tidak berubah.
Under an isometric transformation, the shape and size of the object remain unchanged.

Jawapan/Answer: D

- Pantulan (Songsang sisi)
Reflection (Inverted sides)

Jawapan/Answer: A

- B mempunyai dua paksi simetri.
 B has two axes of symmetry.

Jawapan/Answer: B

- Objek itu mempunyai dua paksi simetri (Peringkat kedua).

The object has two axes of symmetry (Second order).

Jawapan/Answer: B

Bahagian B

- (a) (i) ✗ (ii) ✓

- (b) (i) ✓
(ii) ✗
- 2 (a) B, D
(b) (i) V
(ii) T
- 3 (a) (i) PALSU (Tidak semestinya mempunyai orientasi yang sama)
FALSE (Not necessary to have the same orientation)
(ii) BENAR/TRUE
(b) (i) ✓
(iii) ✓

Bahagian C

- 1 (a) (i) P : Pantulan/Reflection
 Q : Translasi/Translation
(ii) (1) Saiz sama/Same size
(2) Bentuk sama/Same shape
- (b) $\begin{pmatrix} p \\ q \end{pmatrix} + \begin{pmatrix} 3 \\ -5 \end{pmatrix} = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$
 $\begin{pmatrix} p \\ q \end{pmatrix} = \begin{pmatrix} 1 \\ -1 \end{pmatrix} - \begin{pmatrix} 3 \\ -5 \end{pmatrix}$
 $= \begin{pmatrix} -2 \\ 4 \end{pmatrix}$
 $\therefore p = -2, q = 4$

$$\begin{pmatrix} -2 \\ 4 \end{pmatrix} + \begin{pmatrix} 6 \\ -2 \end{pmatrix} = \begin{pmatrix} -2+6 \\ 4-2 \end{pmatrix} \\ = \begin{pmatrix} 4 \\ 2 \end{pmatrix}$$

- Koordinat imej/*Coordinates of image* = $(4, 2)$
(c) Putaran 90° lawan arah jam pada titik $(4, 2)$.
Anticlockwise rotation of 90° at the point $(4, 2)$.
- 2 (a) (1) Putaran 180° pada titik J .
Rotation of 180° at the point J .
(2) Pantulan pada titik J .
Reflection at point J .
- (b) $T + \begin{pmatrix} -2 \\ 0 \end{pmatrix} = \begin{pmatrix} 6 \\ 3 \end{pmatrix}$
 $T = \begin{pmatrix} 6 \\ 3 \end{pmatrix} - \begin{pmatrix} -2 \\ 0 \end{pmatrix}$
 $= \begin{pmatrix} 6+2 \\ 3 \end{pmatrix}$
 $= \begin{pmatrix} 8 \\ 3 \end{pmatrix}$
Translasi/Translation = $\begin{pmatrix} 8 \\ 3 \end{pmatrix}$
- (c) Pantulan pada garis JH .
Reflection in the line JH .
- (d) Luas $DFJG$ /Area of $DFJG$
 $= 136 \div 4$
 $= 34 \text{ unit}^2/\text{units}^2$