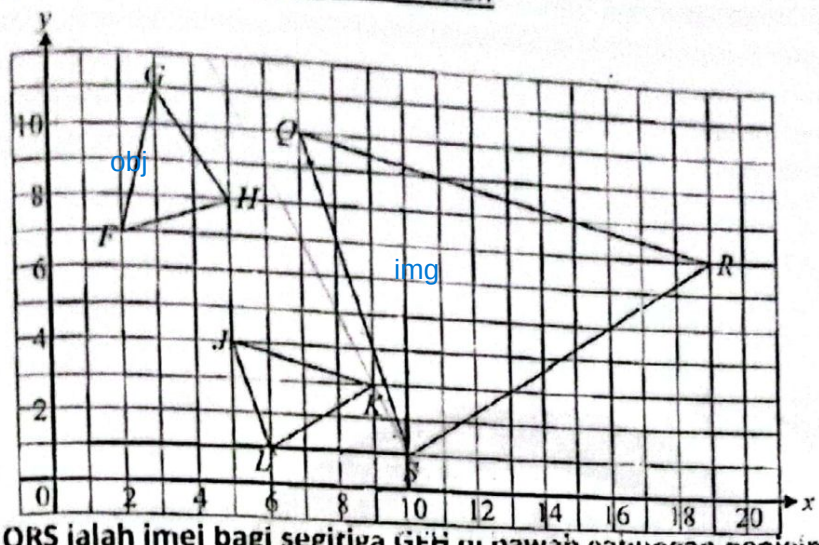


(b) Segitiga QRS ialah imej bagi segitiga GFH di bawah gabungan penjelmaan VU. Huraikan selengkapnya penjelmaan:

Triangle QRS in the image of triangle GFH under the combined transformation VU. Describe in full, the transformation: [6 markah/ marks]

(i)U

clockwise rotation of 90 degrees at point (2,4)

(ii)V

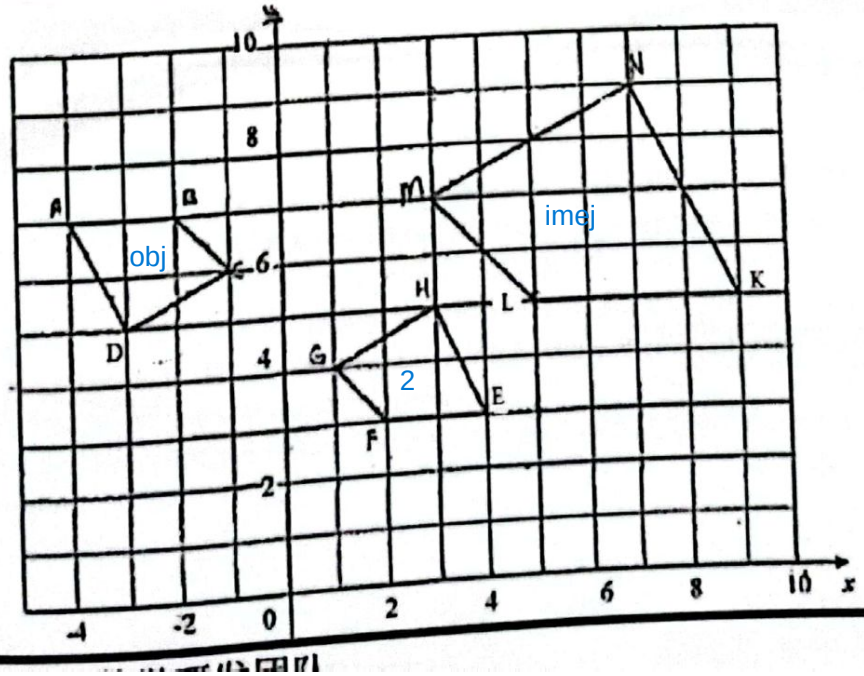
enlargement with scale factor 3 at point (4,1)

(c) Diberi bahawa segitiga QRS mewakili suatu kawasan yang mempunyai luas 72unit². Hitung luas, dalam unit², kawasan yang diwakili oleh segitiga JKL.

It is given that triangle QRS represents a region of area 72 unit². Calculate the area, in unit², of the region represented by triangle JKL. [3 marks/ markah]

2. (b) Rajah 7 menunjukkan tiga sisiempat ABCD, EFGH dan KLMN, dilukis pada suatu satah Cartesan.

Diagram 7 shows three quadrilaterals, ABCD, EFGH and KLMN, drawn on a Cartesian plane.



KLMN ialah imej bagi ABCD di bawah gabungan penjelmaan VU.
KLMN is the image of ABCD under a combined transformation VU.

(i) Huraikan selengkapnya penjelmaan: [6 markah/marks]
Describe in full the transformation:
(a)U

rotation 180 degrees at point (0,5)

(b)V

enlargement with scale factor 2 at point (-1, 1)

(ii) Diberi bahawa KLMN mewakili suatu kawasan yang mempunyai luas 32.4m². Hitung luas, dalam m², kawasan yang diwakili oleh ABCD.
It is given that KLMN represents a region of area 32.4m². Calculate the area, in m², of the region represented by ABCD. [2 marks/ markah]

32.4 = 2^2 * obj
A = 32.4/4 = 8.1m^2

3. Rajah 7.2 menunjukkan tiga segitiga PQR, ACG dan EFG pada satu satah Cartesan.
Diagram 7.2 shows three triangles PQR, ACG and EFG on a Cartesian plane.

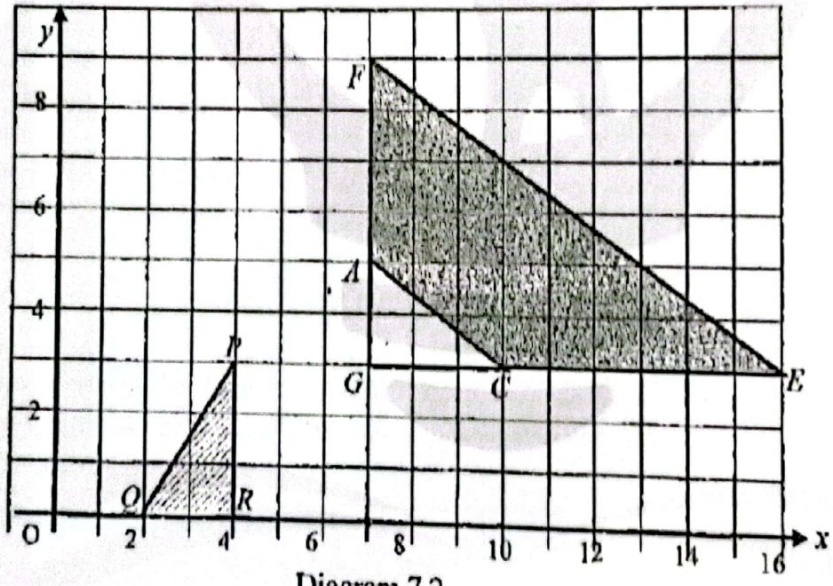


Diagram 7.2
Rajah 7.2

Segitiga ACG adalah imej bagi segitiga PQR di bawah penjelmaan V.
Segitiga EFG adalah imej bagi segitiga ACG di bawah penjelmaan W.
Triangle ACG is the image of triangle PQR under transformation V.
Triangle EFG is the image of triangle ACG under transformation W.

(i) Huraikan selengkapnya penjelmaan:
Describe in full transformation:
(a)V [6 markah/marks]

clockwise rotation of 90 degrees at point (7, 0)

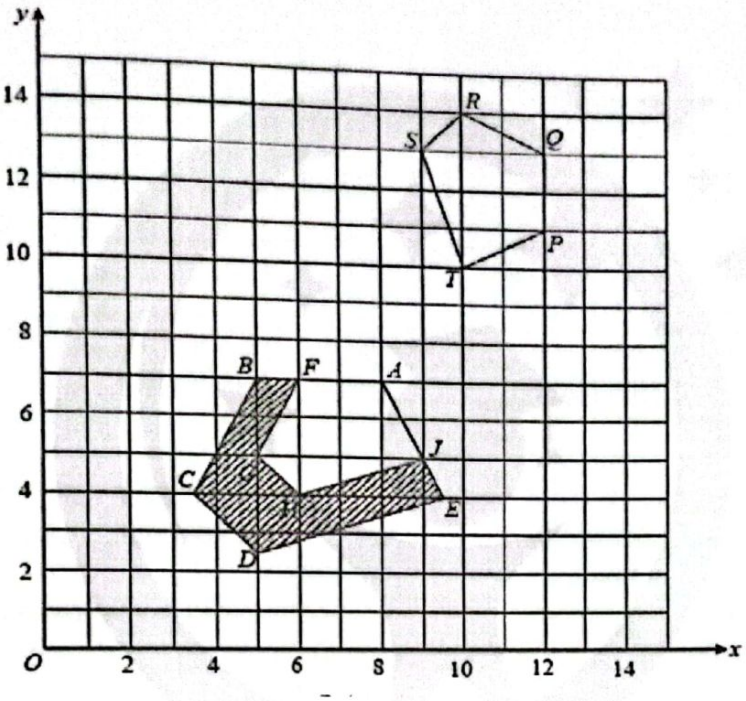
(b)W

enlargement with scale factor 3 at point (7,3)

(ii) **Diberi bahawa segitiga EFG mewakili suatu kawasan berlorek yang mempunyai luas 72unit². Hitung luas, dalam unit², kawasan yang diwakili oleh segitiga PQR.**
Given that the triangle EFG represents a region of area 72unit². Calculate the area, in unit², of the region represented by triangle PQR.
[2 marks/ markah]

72 = 3^2 * object
A = 72 / 9
= 8 unit^2

4.



(b) **AFGHJ ialah imej bagi ABCDE di bawah penjelmaan V.**
PQRS ialah imej bagi AFGHJ di bawah penjelmaan W.
Huraikan selengkapnya penjelmaan:
AFGHJ is the image of ABCDE under transformation V.
PQRST is the image of AFGHJ under transformation of W.
Describe in full the transformation of: *[6 markah/marks]*

(i)V

enlargement with scale factor 2/3 at the point (8,7)

(i)W

clockwise rotation 90 degrees at point (12,7)

(c) **Diberi bahawa pentagon ABCDE mewakili suatu kawasan yang mempunyai luas 81cm².**
Hitung luas, dalam cm², kawasan yang berlorek.
It is given that pentagon ABCDE represents a region of area 81cm². Calculate area, in cm², of the shaded region.
[3 marks/ markah]

81 =

5. **Rajah 13.2 menunjukkan tiga pentagon ABCDE, FGHIE dan JKLMN, dilukis pada satah Cartesan.**
Diagram 13.2 shows three pentagons ABCDE, FGHIE and JKLMN, drawn on a Cartesian plane.

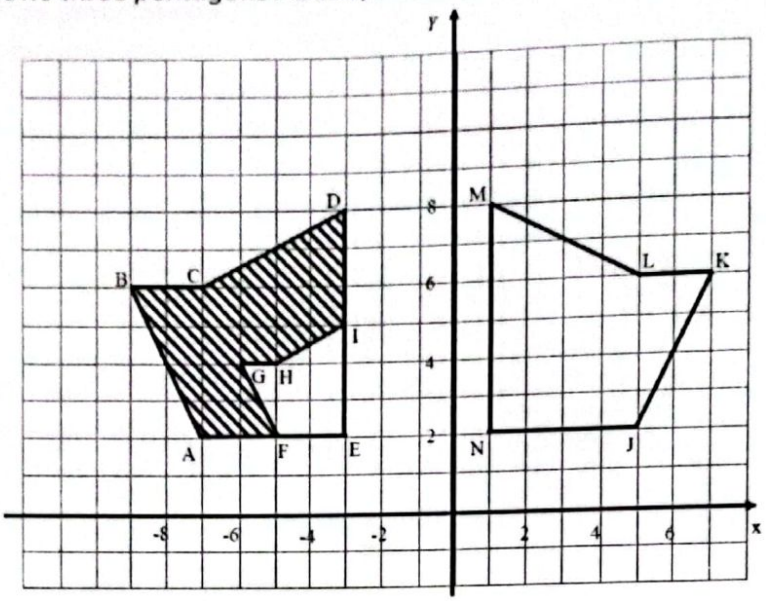


Diagram 13.2
Rajah 13.2

(i) FGHIE ialah imej bagi pentagon JKLMN di bawah gabungan penjelmaan WV. Huraikan selengkapnya penjelmaan:
FGHIE is the image of pentagon JKLMN under the combined transformation WV. Describe, in full, the transformation: [6 markah/marks]

(a)V

reflection at x = -1

(b)W

enlargement of scale factor 1/2 at point (-3, 2)

(ii) Diberi bahawa luas pentagon FGHIE ialah 24.5cm². Hitung luas, dalam cm², kawasan yang berlorek.
It is given that the area of pentagon FGHIE is 24.5cm². Calculate the area, in cm², of the shaded region. [3 marks/ markah]

24.5 = 1/2 ^2 * object
object = 24.5*4 = 98
A = 98 - 24.5 = 73.5cm^2

6.

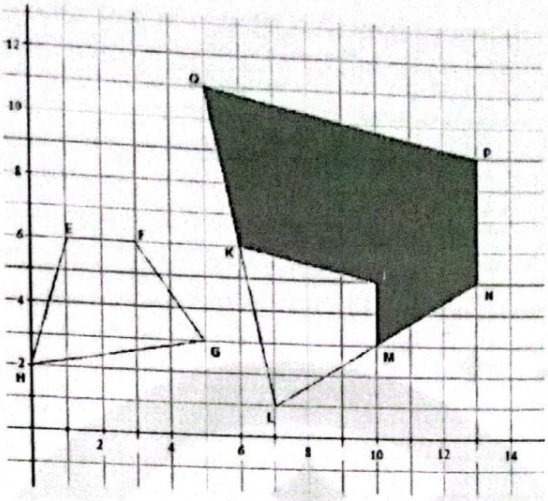


Diagram 13
Rajah 13

(b) *PQLN ialah imej bagi EFGH di bawah gabungan penjelmaan VU. Huraikan selengkapnya.*
PQLN is the image of EFGH under the combined transformation VU. Describe in full, the transformation.

(i) The transformation U, *Penjelmaan U,*

clockwise rotation 90 degrees at point (5,1)

(i) The transformation V. *Penjelmaan V.*

enlargement with scale factor 2 at point (7,1)

(c) Diberi bahawa EFGH mewakili suatu kawasan yang mempunyai luas 25.5m². Hitung luas, dalam m², kawasan yang diwakili oleh kawasan berlorek.
It is given that EFGH represents a region of area 25.5m². Calculate the area, in m², of the region represented by the shaded region. [3 marks/ markah]

7 (b) Rajah 13.2 menunjukkan dua pentagon, ABCDE dan PQRST dilukis pada grid segi empat sama.
Diagram 13.2 shows two pentagons, ABCDE and PQRST drawn on square grids.

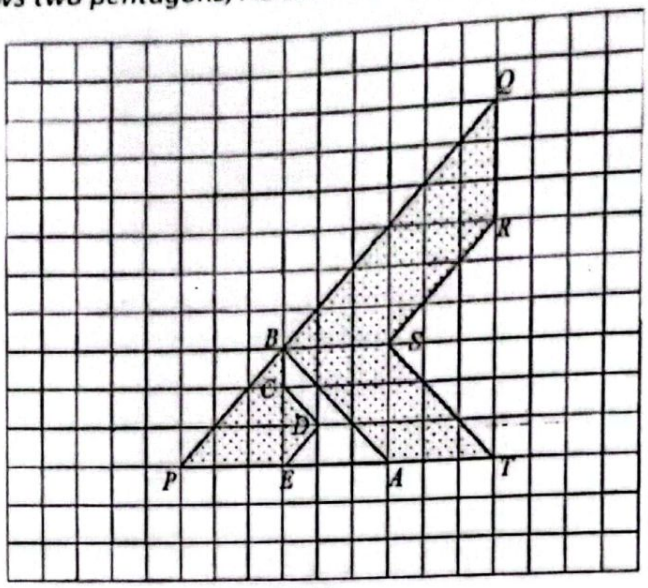


Diagram 13.2
Rajah 13.2

(i) PQRST ialah imej bagi ABCDE di bawah gabungan penjelmaan WV. Huraikan selengkapnya penjelmaan:
PQRST is the image of ABCDE under the combined transformation WV. Describe in full, the transformation:

(a) V

reflection on the line EC

(b) W

enlargement with scale factor 3 at point P

(ii) Diberi bahawa pentagon ABCDE mewakili suatu kawasan yang mempunyai luas 35m².Hitung luas, dalam m², kawasan yang berlorek.
It is given that pentagon ABCDE represents a region of area 35m². Calculate the area, in m², of the shaded region

[3 marks/ markah]

image = 3^2 * 35 = 315
A = 315 - 35 = 280m^2

8. **Rajah 13.2 menunjukkan dua heksagon, ABCDEF dan PQRATS dilukis pada grid segi empat sama.**
Diagram 13.2 shows two hexagons, ABCDEF and PQRATS drawn on square grids.

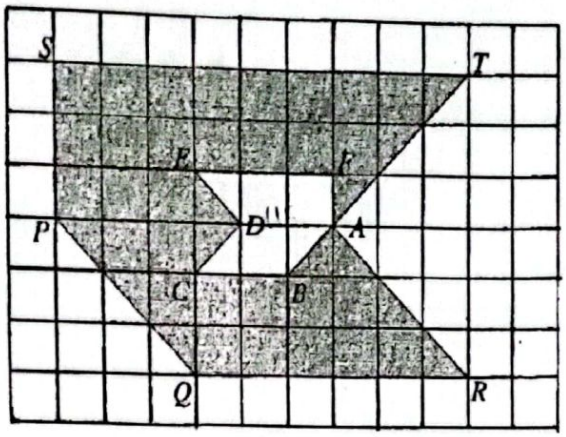


Diagram 13.2
Rajah 13.2

(i) PQRATS ialah imej bagi ABCDEF di bawah gabungan penjelmaan VU. Huraikan selengkapnya penjelmaan:
PQRATS is the image of ABCDEF under the combined transformation VU. Describe in full, the transformation: [6 marks/ markah]

(a)U

reflection at line EC

(b)V

enlargement with scale factor 3 at point P

(ii) Diberi bahawa ABCDEF mewakili suatu kawasan yang mempunyai luas 45m². Hitung luas, dalam m², kawasan yang diwakili oleh kawasan berlorek.
It is given that ABCDEF represents a region of area 45m². Calculate the area, in m², of the region represented by the shaded region. *[2 marks/ markah]*

image = 3^2 * 45 = 405
A = 405 - 45 = 360m^2

9. **Rajah 13.2 menunjukkan tiga pentagon ABCDE, APQRS dan FGHIJ dilukis pada grid segiempat sama.**
Diagram 13.2 shows three pentagons, ABCDE, APQRS and FGHIJ drawn on square grids.

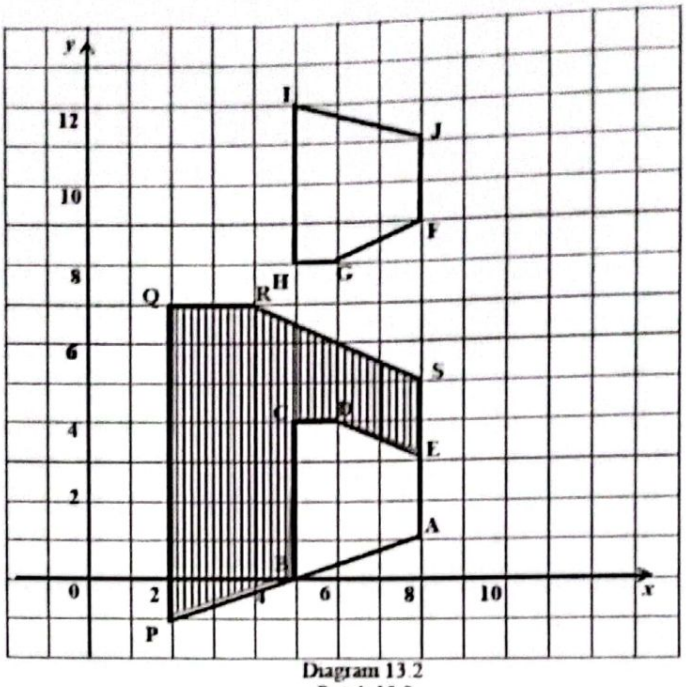


Diagram 13.2
Rajah 13.2

(b) APQRS adalah imej bagi FGHIJ di bawah gabungan penjelmaan MN. Huraikan selengkapnya penjelmaan:
APQRS is the image of FGHIJ under combined transformation MN. Describe in full, the transformation: [5 marks/ markah]

(i)N

reflection at line y = 6

(ii) M

enlargement with scale factor 2 at point (8,1)

(c) Diberi bahawa luas kawasan berlorek ialah 30cm². Cari luas, dalam cm², pentagon FGHIJ.
It is given that the area of the shaded region is 30cm².Calculate the area, in cm², the pentagon FGHIJ.
[2 marks/ markah]

30 = (2^2 * object) - object
30 = 4o - o = 3o
object = 10

10.

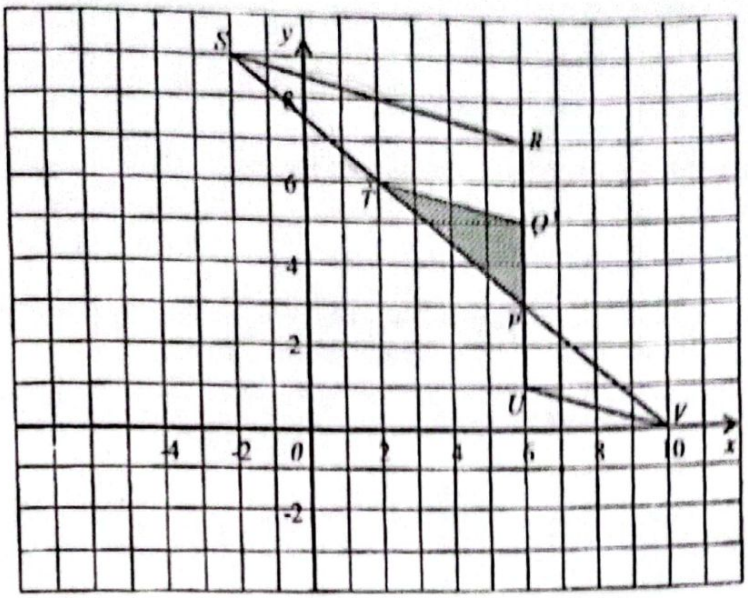


Diagram 13/ *Rajah 13*

(b)(i) **PQT ialah imej bagi PUV di bawah penjelmaan M dan PRS ialah imej bagi PQT di bawah penjelmaan N.**
PQT is the image of PUV under the transformation M and PRS is the image of PQT under the transformation N.

Huraikan selengkapnya penjelmaan:
Describe in full the transformation: [6 marks/ markah]

(a)M

rotation 180 degrees at point (6,3)

(a)N

enlargement with scale factor 2 at point (6,3)

(ii) **Jika luas segitiga PQT ialah 16m², hitungkan luas trapezium QRST.**
If the area of triangle PQT is 16m², calculate the area of trapezium QRST.
[2 marks/ markah]

A = 2^2 * 16 = 64m^2

11.

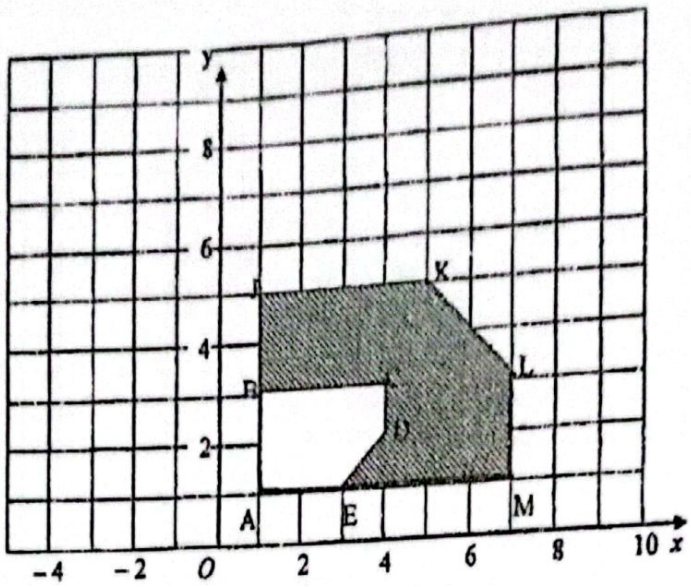


Diagram 13.2
Rajah 13.2

(b) JKLMA ialah imej bagi ABCDE di bawah gabungan penjelmaan WV.
Huraikan selengkapnya penjelmaan:
JKLMA is the image of ABCDE under a combined transformations WV.
Describe in full, the transformation: [6 marks/ markah]

(i)V

reflection at line y=3

(ii) W

enlargement with scale factor 2 at point (1,5)

(c) Diberi bahawa ABCDE mewakili suatu kawasan yang mempunyai luas 18m². Hitung luas, dalam m², kawasan yang diwakili oleh kawasan yang berlorek.
It is given that ABCDE represents a region of area 18m².
Calculate the area, in m², of the region represented by shaded region. [2 marks/ markah]

image = 2^2 * 18 = 72
72 - 18 = 54m^2