

<b>PECUTAN MATEMATIK PMR SET 4</b>
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Answer **all** questions  
*Jawab semua soalan*

1. Calculate the value of :

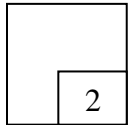
*Hitungkan nilai bagi*

$$49 \div 7 - 12$$

[2 marks]  
[2 markah]

Answer/ *Jawapan* :

**1**



2. Calculate the value of :

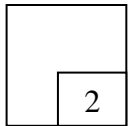
*Hitungkan nilai bagi :*

$$\frac{5 \times 0.12}{0.3}$$

[2 marks]  
[2 markah]

Answer / *Jawapan*:

**2**



3. (a) Find the value of:

*Cari nilai bagi*

$$\sqrt[3]{-125}$$

- (b) Calculate the value of :

*Hitungkan nilai bagi .*

$$10 + \sqrt{36}$$

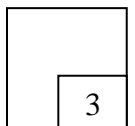
[3 marks]  
[3 markah]

Answer / *Jawapan*:

(a)

(b)

**3**



4. Solve each of the following linear equations :  
*Selesaikan persamaan yang berikut :*

(a)  $y + 3 = 9$

(b)  $\frac{2x+4}{3} = x$

[3 marks]

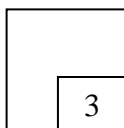
[3 markah]

Answer/ Jawapan :

(a)

(b)

4



5. Factorise each of the following completely.  
*Faktorkan setiap yang berikut selengkapnya*

(a)  $3m + 12$

(b)  $27 - 3y^2$

[3 marks]

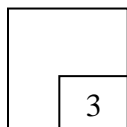
[3 markah]

Answer/ Jawapan :

(a)

(b)

5



6. Expand each of the following expressions:  
*Kembangkan setiap ungkapan berikut:*

(a)  $x(3 + y)$

(b)  $(3r + 4s)(r + s)$

[3 marks]

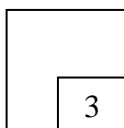
[3 markah]

Answer/ Jawapan :

(a)

(b)

6



7. In Diagram 7, draw the image of P under a reflection in the straight line MN.  
 Dalam Rajah 7, lukis imej bagi P di bawah satu pantulan pada garis lurus MN.

For  
 Examiner's  
 Use

[2 marks]  
 [2 markah]

Answer/ Jawapan :

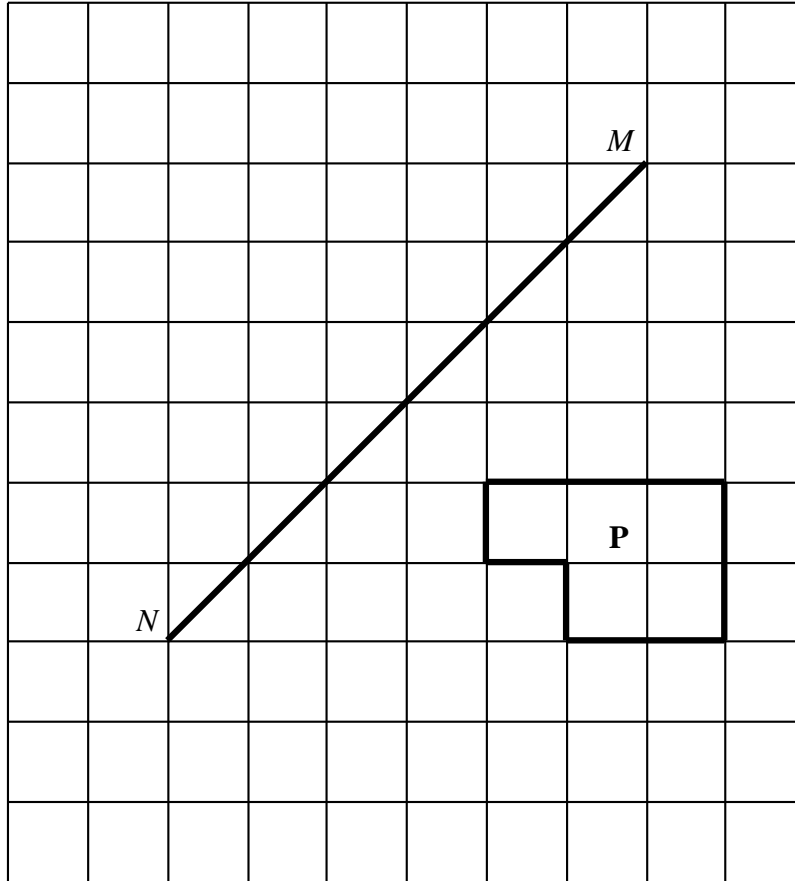


Diagram 7  
 Rajah 7

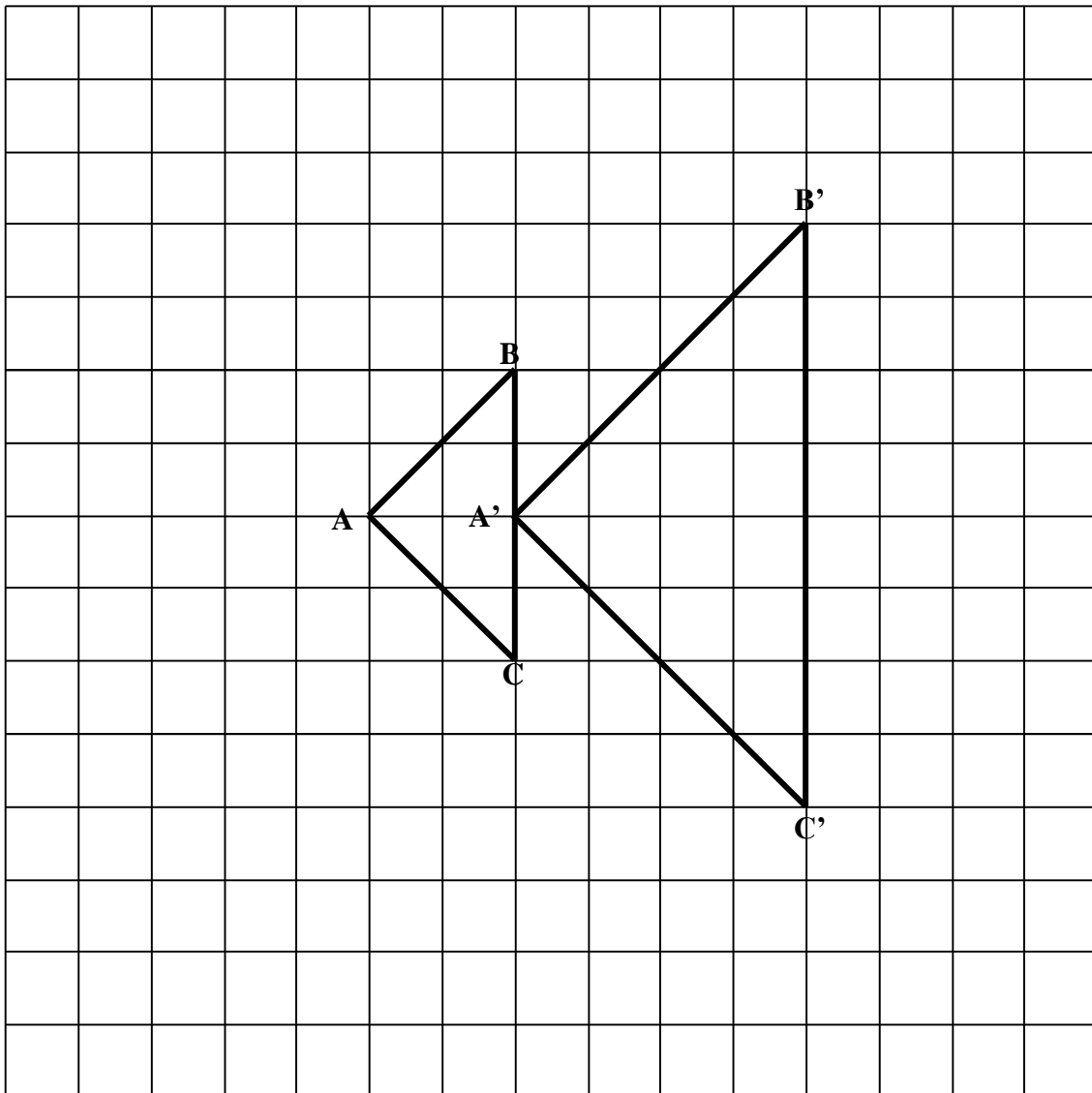
8. Diagram 8 shows two triangles,  $ABC$  and  $A'B'C'$ , drawn on a grid of equal squares. In the answer space mark **P** as the centre of enlargement.

*Rajah 8 menunjukkan dua buah segitiga,  $ABC$  dan  $A'B'C'$  yang dilukis pada grid segiempat sama. Di ruang jawapan, tandakan  $P$  sebagai pusat pembesaran.*

[2 marks]

[2 markah]

Answer/ Jawapan :



8

2

Diagram 8  
Rajah 8

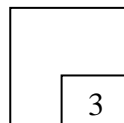
9. Express  $\frac{1}{2h} + \frac{k-1}{h}$  as a single fraction in its simplest form.

*Ungkapkan  $\frac{1}{2h} + \frac{k-1}{h}$  sebagai satu pecahan tunggal dalam bentuk termudah.*

[3 marks]  
[3 markah]

Answer/ Jawapan :

9



10. Solve each of the following inequalities:

*Selesaikan tiap-tiap ketaksamaan berikut:*

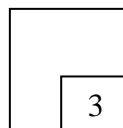
- (a)  $x + 3 > 5$   
(b)  $7 + 3m \geq 8 + 2m$

[3 marks]  
[3 markah]

Answer/ Jawapan :

- (a) (b)

10



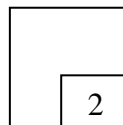
11. Given that  $5a + 9 = b$ . Express  $a$  in terms of  $b$ .

*Diberi bahawa  $5a + 9 = b$ . Ungkapkan  $a$  dalam sebutan  $b$ .*

[2 marks]  
[2 markah]

Answer/ Jawapan :

11



12. (a) Find the value of

*Cari nilai bagi*  
 $3^5 \div 3^3$

- (b) Simplify:

*Permudahkan:*  
 $(3mn^2)^2 \div n$

[3 marks]  
[3 markah]

Answer/ *Jawapan* :

(a)

(b)

12

3

13. The data below shows the scores obtained by 17 participants in a competition.

*Data di bawah menunjukkan skor yang diperolehi 17 peserta dalam satu pertandingan melukis.*

2	4	6	4	5	3	5	7	5
3	2	5	5	5	2	3	6	

- (a) Complete the frequency table in the answer space.

*Lengkapkan jadual kekerapan di ruang jawapan*

- (b) State the mode.

*Nyatakan mod.*

[3 marks]  
[3 markah]

Answer/ *Jawapan* :

(a)

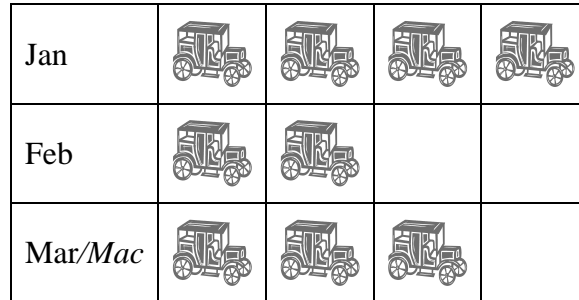
Score	2	3	4	5	6	7
Frequency						

(b)

3

3

14. Diagram 14 is a pictograph showing the number of cars sold by a company over a period of three months. In the answer space, draw a bar chart to represent the data.  
*Rajah 14 ialah sebuah piktograf yang menunjukkan bilangan kereta yang dijual oleh sebuah syarikat dalam tempoh 3 bulan. Pada rajah di ruang jawapan, lukis sebuah carta palang untuk mewakili data tersebut.*

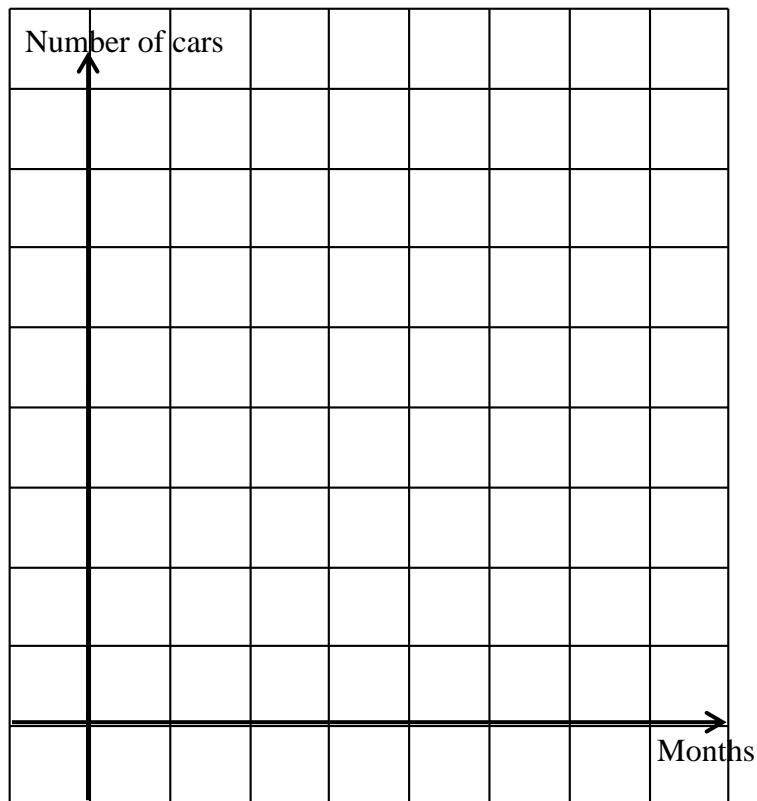


represent 20 cars  
*mewakili 20 kereta*

Diagram 14  
*Diagram 14*

[4 marks]  
 [4 markah]

Answer/ *Jawapan* :



15. Diagram 15 shows a prism. One of the surfaces of the net of the prism is drawn on a grid of equal squares with sides of 1 unit as shown in the answer space.  
*Rajah 15 menunjukkan sebuah prisma. Di ruang jawapan satu daripada muka bentangan prisma itu dilukis pada grid segi empat sama yang bersisi 1 unit.*

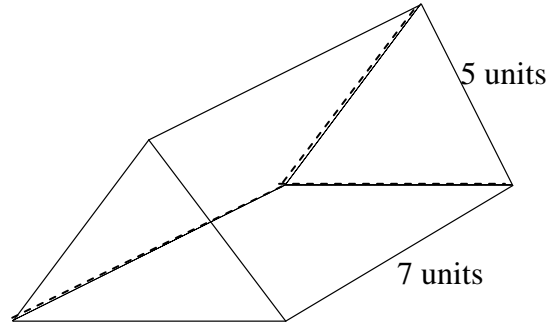
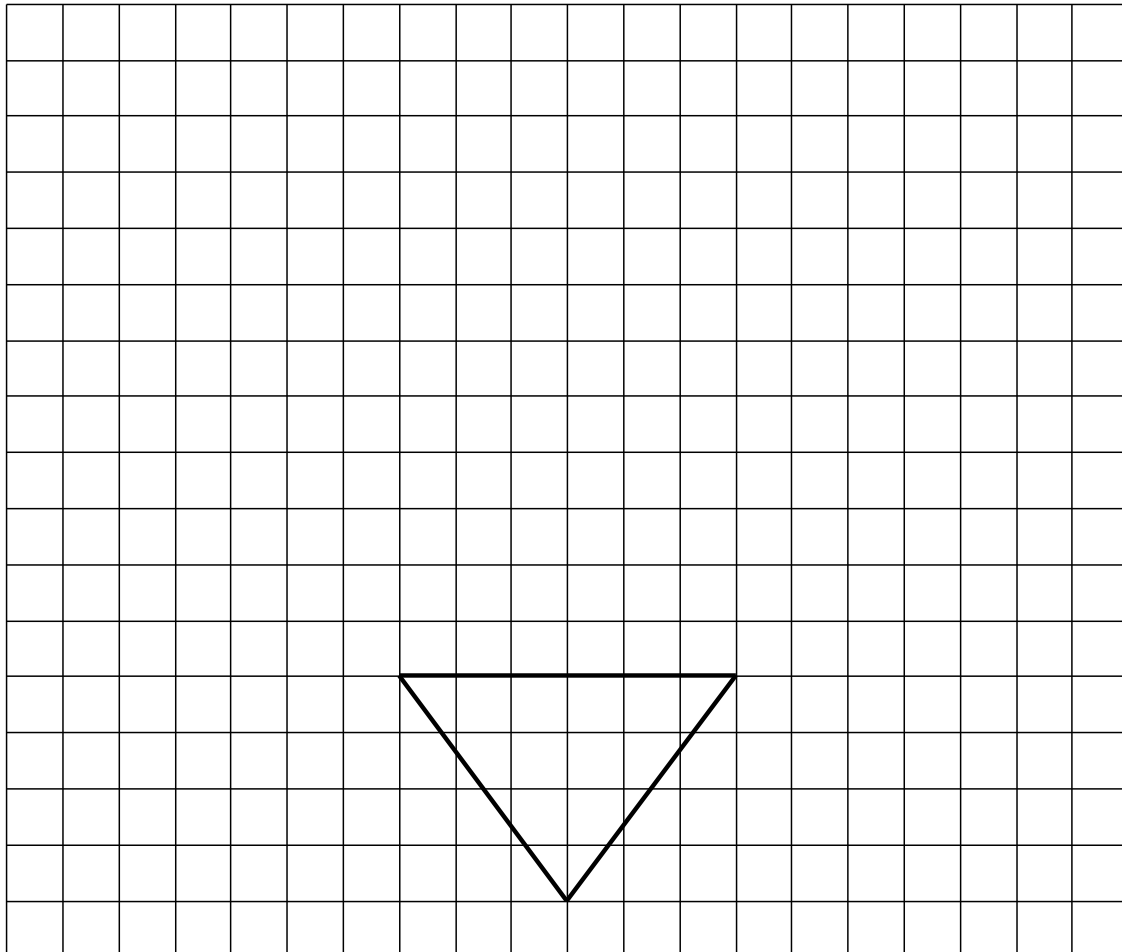


Diagram 15  
*Rajah 15*

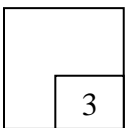
Complete the net of the prism.  
*Lengkapkan bentangan prisma itu.*

[3 marks]  
[3 markah]

Answer/ *Jawapan:*



15





16. Diagram 16 in the answer space shows a rhombus  $PQRS$  drawn on a grid of equal squares with sides of 1 unit.  $W$ ,  $X$  and  $Y$  are three moving points in the diagram.  
*Rajah 16 di ruang jawapan menunjukkan sebuah rombus  $PQRS$  yang dilukis pada grid segi empat sama dengan sisi 1 unit.  $W$ ,  $X$  dan  $Y$  ialah tiga titik yang bergerak dalam rajah itu.*
- (a)  $W$  is the point which moves such that it is equidistant from point  $Q$  and point  $S$ .  
By using the letters in the diagram, state the locus of  $W$ .  
*W ialah titik yang bergerak dengan keadaan jaraknya adalah sama dari titik  $Q$  dan titik  $S$ .  
Dengan menggunakan huruf dalam rajah itu, nyatakan locus bagi  $W$ .*
- (b) On the Diagram 16, draw  
*Pada Rajah 16, lukis*
- (i) the locus of the point  $X$  which moves such that it is constantly 5 units from the point  $S$ .  
*locus bagi titik  $X$  yang bergerak dengan keadaan jaraknya 5 unit dari titik  $S$ .*
- (ii) the locus of point  $Y$  which moves such that it is equidistant from lines  $PQ$  and  $QR$ .  
*locus bagi titik  $Y$  yang bergerak dengan keadaan sama jarak dari garis  $PQ$  dan  $QR$ .*
- (c) Hence, mark with symbol  $\otimes$  the intersection of the locus of  $X$  and the locus of  $Y$ .  
*Seterusnya, tanda dengan symbol  $\otimes$  persilangan bagi locus bagi  $X$  dan locus bagi  $Y$ .*

[5 marks]  
[5 markah]

Answer/ Jawapan:

- (a)  
(b) (i), (ii) and (c)

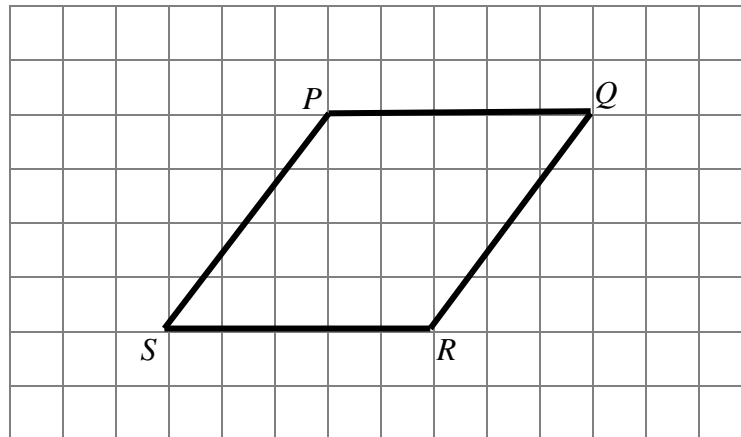
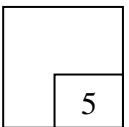


Diagram 16

16



17. Diagram 17 shows a triangle  $JKL$ .  
*Rajah 17 menunjukkan sebuah segi tiga  $JKL$ .*

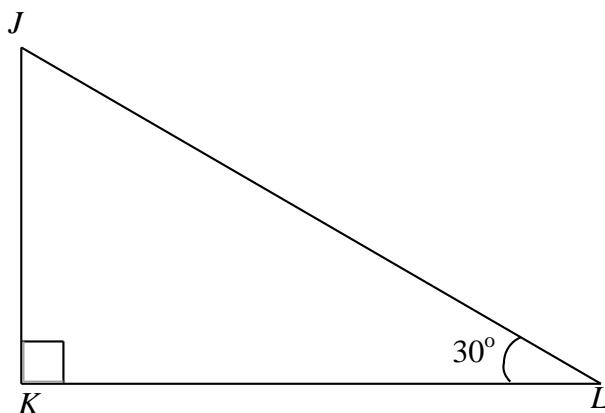


Diagram 17  
*Rajah 17*

Construct:

*Bina*

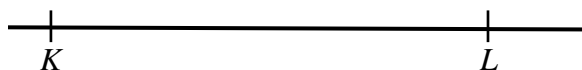
- (a) the triangle  $JKL$  beginning from the straight line  $KL$  provided in the answer space.  
*Segitiga  $JKL$  bermula dengan garis  $KL$  yang disediakan diruang jawapan.*  
(b) the perpendicular line from point  $K$  to the line  $JL$ .  
*Garis seranjang dari titik  $K$  ke garis  $JL$ .*  
(c) Hence, measure the perpendicular distance between point  $K$  and the straight line  $JL$ .

*Seterusnya, ukur garis seranjang di antara titik  $K$  dan garis lurus  $JL$ .*

[5 marks]  
[5 markah]

Answer/ *Jawapan*:

- (a) , (b)



- (c)

18. Diagram 18 shows two similar triangles.  
Rajah 18 menunjukkan dua segi tiga serupa.

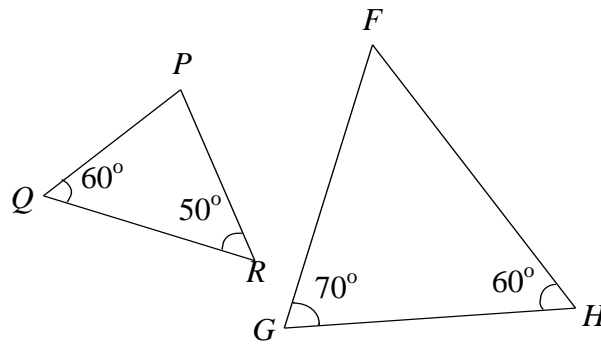


Diagram 18  
Rajah 18

State

Nyatakan

- (a) the angle in the triangle  $GHF$  which correspond to  $\angle QPR$  in triangle  $PQR$ .  
Sudut dalam segitiga  $GHF$  yang sepadan dengan  $\angle QPR$  dalam segitiga  $PQR$ .  
(b) the side in the triangle  $GHF$  which correspond to side  $PQ$  in triangle  $PQR$ .  
Sisi dalam segitiga  $GHF$  yang sepadan dengan sisi  $PQ$  dalam segitiga  $PQR$ .

[2 marks]

[2 markah]

Answer/ Jawapan:

(a)

(b)

18

2

19. In Diagram 19,  $EDB$  is a straight line.  
Dalam Rajah 19,  $EDB$  ialah garis lurus.

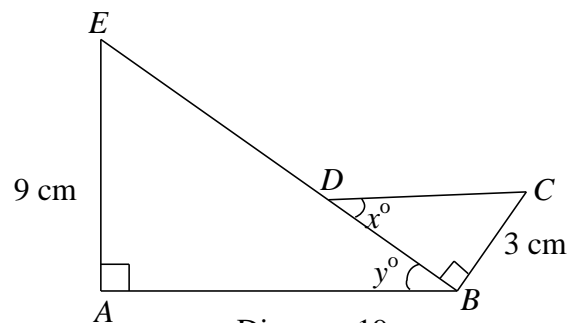


Diagram 19  
Rajah 19

Given that  $\sin x^\circ = \frac{3}{5}$  and  $\tan y^\circ = \frac{3}{4}$ , find the length, in cm, of  $ED$ .

Diberi  $\sin x^\circ = \frac{3}{5}$  dan  $\tan y^\circ = \frac{3}{4}$ , cari panjang  $ED$  dalam cm.

[3 marks]

[3 markah]

Answer/ Jawapan:

19

3

For  
Examiner's  
Use

20. Use the graph paper provided to answer this question.  
*Gunakan kertas graf yang disediakan untuk menjawab soalan ini.*

Table 20 shows the values of two variables,  $x$  and  $y$  of a function.  
*Jadual 20 menunjukkan nilai-nilai dua pembolehubah,  $x$  dan  $y$  bagi suatu fungsi.*

$x$	0	1	2	3	4	5	6
$y$	5	3	-3	-17	-27	-45	-67

Table 20  
*Jadual 20*

By using a scale of 2 cm to 1 unit on the  $x$ -axis and 2 cm to 10 units on the  $y$ -axis, draw the graph of the function.

*Dengan menggunakan skala 2 cm kepada 1 unit pada paksi- $x$  dan 2 cm kepada 10 unit pada paksi- $y$ , lukis graf bagi fungsi itu.*

[4 marks]  
[4 markah]

20

