

LEMBAGA PEPERIKSAAN
SEKOLAH-SEKOLAH MENENGAH ZON B BAHAGIAN KUCHING
PEPERIKSAAN PERCUBAAN PMR 2008

MATEMATIK

Kertas 1

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JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. *Kertas soalan ini adalah dalam Bahasa Inggeris.*
2. *Calon dikehendaki membaca maklumat di halaman 2.*

Kertas soalan ini mengandungi 21 halaman bercetak

1 Which of the following when rounded off to the nearest thousand is 339 000?

- A 338 199
- B 338 488
- C 338 902
- D 339 554

2

8 is a factor of p .

p is a factor of 72.

Based on the statements above, the possible value of p is

- A 16
- B 24
- C 36
- D 48

3 The Lowest Common Multiple (LCM) of 8, x and 36 is 72. The possible value of x is *except*

- A 18
- B 16
- C 12
- D 4

4 Aminah has savings of RM800 in a bank. John's savings are $2\frac{1}{2}$ times Aminah's savings while Neeta's savings are $\frac{3}{4}$ that of John's. What is the amount of money

Neeta has saved in her bank?

- A RM1000
- B RM1500
- C RM2000
- D RM2500

5 Which of the following fractions has the highest value?

A $\frac{5}{7}$

B $\frac{1}{9}$

C $\frac{3}{11}$

D $\frac{7}{18}$

6 In a class, 64 % of its students are Malays, 32 % are Chinese and the rest are Indians. If the class has 2 Indian students, then the total number of students in the class is

A 40

B 44

C 48

D 50

7 Diagram 1 shows a trapezium $OPQR$ and a quadrant OPR with O as the centre. Given that $OR = 14$ cm and $PQ = 2OR$.

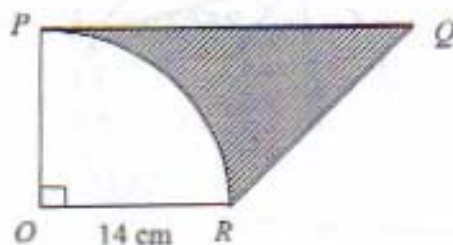


DIAGRAM 1

Calculate the area, in cm^2 of the shaded region.

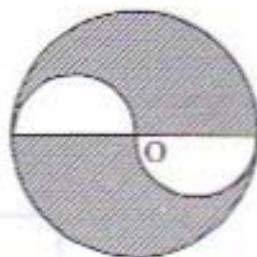
A 98

B 140

C 196

D 212

- 8 Diagram 2 shows a circle and two semicircles. O is the centre of the big circle with radius 28 cm.



(use $\pi = \frac{22}{7}$)

DIAGRAM 2

Find the perimeter, in cm, of the unshaded region.

- A 56
 B 88
 C 144
 D 196
- 9 In Diagram 3, HGF is a straight line and $DE = EF$.

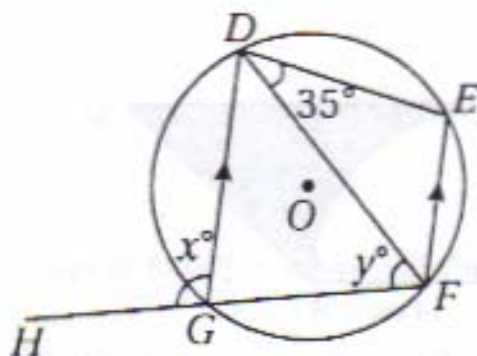


DIAGRAM 3

The value of $x - y$ is

- A 24
 B 35
 C 65
 D 110

- 10 In Diagram 4, O is the centre of the circle and PQR is a straight line.

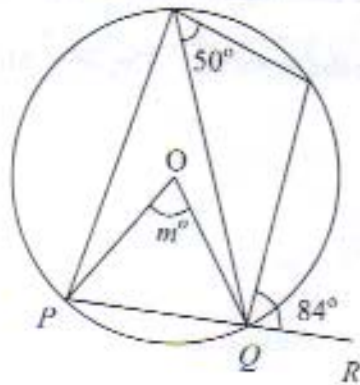


DIAGRAM 4

The value of m is

- A 34
 B 42
 C 68
 D 96
- 11 Diagram 5 shows a circle $PQRS$ with centre O .

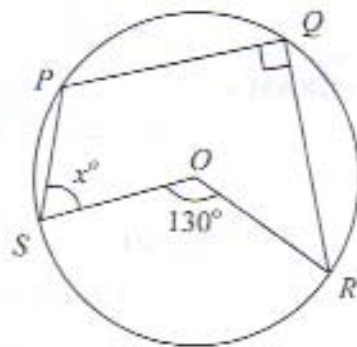


DIAGRAM 5

The value of x is

- A 25
 B 40
 C 50
 D 65

- 12 Mr. Jim left Melaka at 7.40 in the morning for Johor Bahru. He estimated $4\frac{1}{2}$ hours for the journey but arrived 20 minutes earlier. The time Mr. Jim arrived in Johor Bahru is

- A 11.30 am
- B 11.50 am
- C 12.10 pm
- D 12.30 pm

- 13 In Diagram 6, LMN is a straight line.

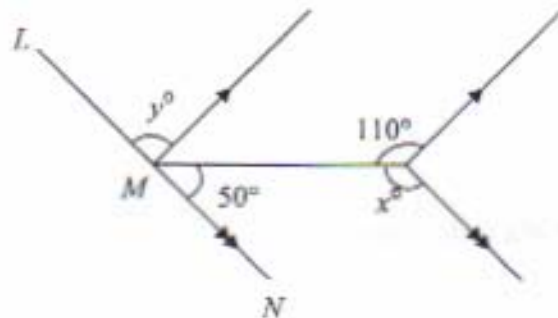


DIAGRAM 6

The value of $x + y$ is

- A 110
- B 130
- C 180
- D 190

- 14 In Diagram 7, FHK and $GHIJ$ are straight lines.

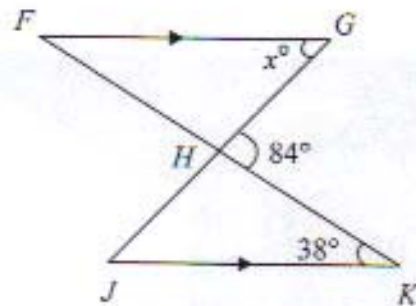


DIAGRAM 7

The value of x is

- A 38
 B 46
 C 60
 D 64
- 15 In Diagram 8, ACD , BCE and DEF are straight lines.

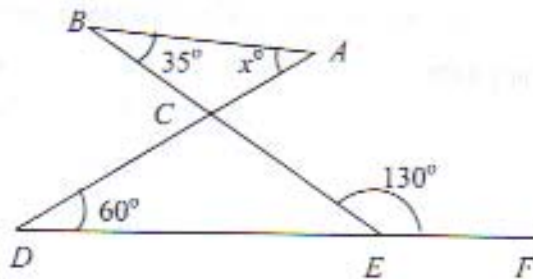


DIAGRAM 8

Find the value of x .

- A 60
 B 65
 C 70
 D 75

- 16 In Diagram 9, DEF and JEH are straight lines. Triangle DEJ is an equilateral triangle.

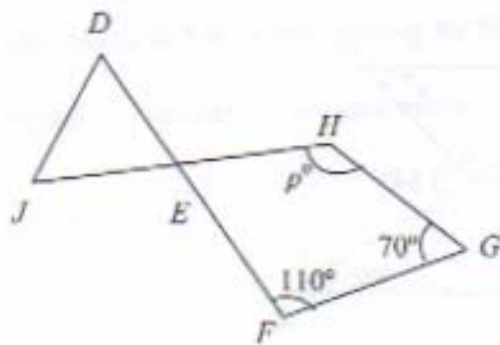


DIAGRAM 9

The value of p is

- A 100
 B 110
 C 120
 D 130
- 17 Given that the exterior angle of a regular polygon is 36° , which of the following statements are true?
- I Its interior angle is 144° .
 II The sum of its interior angles is 1440° .
 III It has ten axes of symmetry.
- A I and II only
 B I and III only
 C II and III only
 D I, II and III

- 18 In Diagram 10, $PQRS$ is a rectangle. T and U are the midpoints of RS and QS respectively.

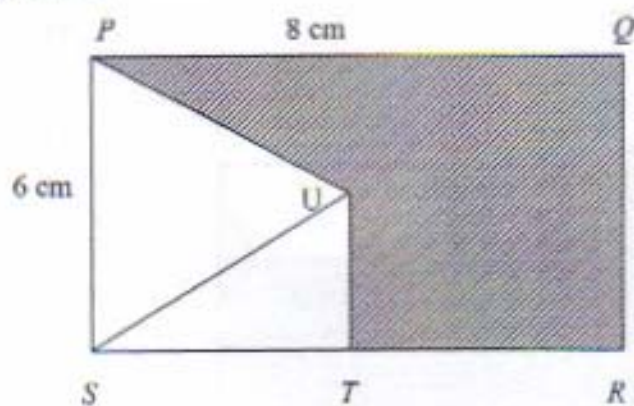


DIAGRAM 10

- The area of the shaded region, in cm^2 , is
- A 18
B 24
C 30
D 42
- 19 The lowest term of the ratio $16 : 48$, is
- A $1 : 2$
B $2 : 3$
C $1 : 3$
D $3 : 2$

- 20 In Diagram 11, $PRST$ is a rectangle and $QRVU$ is a parallelogram. Given that

$$QR = \frac{1}{2}PT \text{ and } QU = \frac{1}{2}PQ.$$

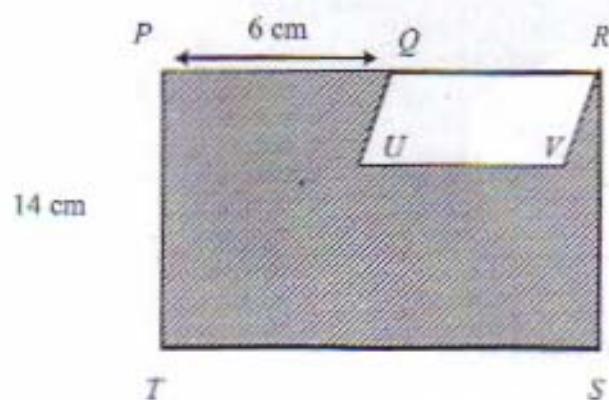


DIAGRAM 11

Find the perimeter, in cm, of the shaded region.

- A 67
 B 60
 C 54
 D 20
- 21 Albert has $(7n + 2)$ cartoon stickers. His brother, Spenser has twice of that number. If both of them have a total of $(15n + 24)$ cartoon stickers, find the value of n .
- A 3
 B 4
 C 8
 D 6
- 22 The interior angles of a triangle are in a ratio of $2 : 5 : 8$. Find the value of the smallest angle.
- A 18°
 B 24°
 C 60°
 D 96°

- 26 Diagram 13 shows points marked on a grid of equal squares with sides of 2 units.

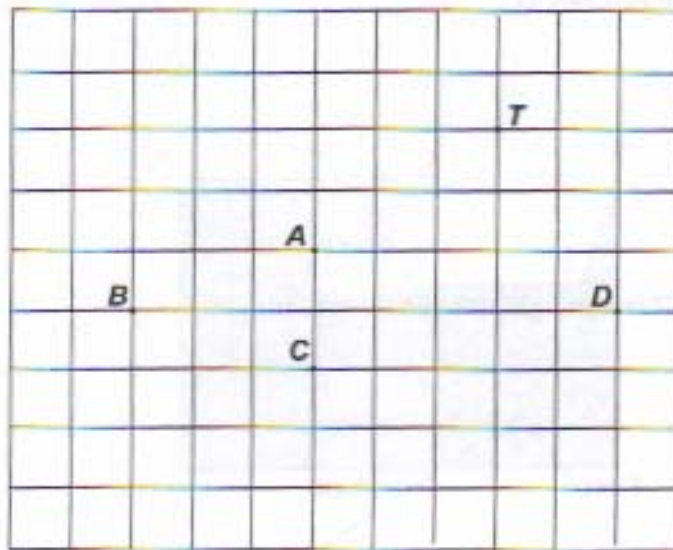


DIAGRAM 13

- Which of the points A , B , C and D , is 10 units from the point T ?
- 27 $M(4, 1)$ is the midpoint of the line joining $P(3, 4)$ and Q . What is the length, in units, of PQ .
- A 40
B 64
C $\sqrt{36}$
D $\sqrt{40}$

- 28 In Diagram 14, S , T and U are the centres of circles of radii 1 cm, 2 cm and 3 cm respectively.

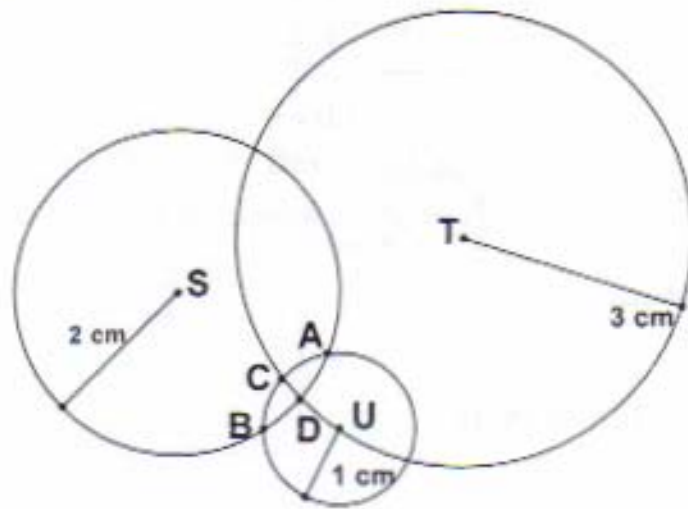


DIAGRAM 14

- Which of the points labelled A , B , C and D is 2 cm from S and 3 cm from T ?
- 29 In Diagram 15 below, the shaded hexagon is drawn on a tessellation of equilateral triangles. The shaded hexagon is given a rotation of 120° clockwise about the centre O . Which of the points A , B , C and D is the image of point P ?

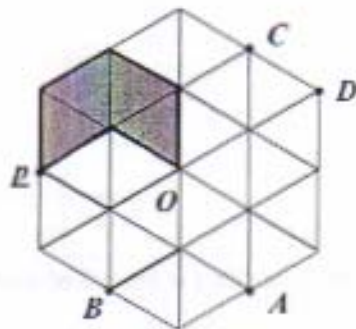


DIAGRAM 15

- 30 Diagram 16 shows a cuboid with volume 96 cm^3 .

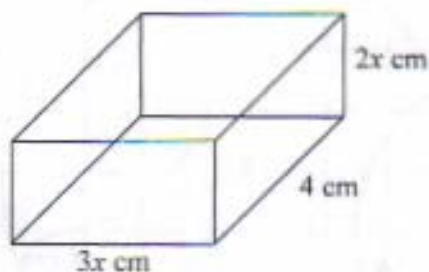


DIAGRAM 16

Find the value of x .

- A 2
B 4
C 8
D 12
- 31 The surface area of a cube is 150 cm^2 , find the volume of the cube, in cm^3 .
A 25
B 15
C 125
D 450
- 32 The difference between the median and the mode for the set of numbers 40, -27, 40, 8 and -13 is
A 0
B 1.6
C 30.4
D 32

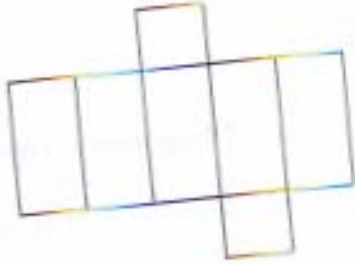
33 Diagram 17 shows a cuboid with a square base.



DIAGRAM 17

Which of the following is a possible net of the cuboid?

A



B



C



D



- 34 Diagram 18 shows a right pyramid with a square base of side 12 cm .

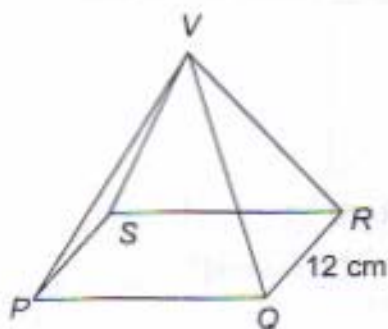


DIAGRAM 18

Calculate the height, in cm, of the pyramid, if the volume of the pyramid is 912 cm^3 .

- A 15
 B 17
 C 19
 D 21
- 35 Table 1 shows the number of tins collected by a group of students in a recycle campaign.

Number of tins	10	15	20	25	30
Frequency	3	6	5	4	2

TABLE 1

Calculate the mean number of tins collected by a student.

- A 15
 B 16
 C 19
 D 24
- 36 If the mode of 6, 8, x , -2, 9 and 11 is 8, then $x =$
- A 8
 B 9
 C 10
 D 11

- 37 Table 2 shows the scores for a group of students in a quiz.

Score	1	2	3	4	5
Number of students	7	12	15	13	3

TABLE 2

Determine the median score.

- A 1
B 2
C 3
D 4
- 38 Solve the linear inequality $12 - 4x \leq 16$.
- A $x \leq -1$
B $x \geq -7$
C $x \leq -7$
D $x \geq -1$
- 39 Given the function, $y = 2x^2 + 3x - 4$. Find the value of y when $x = -2$.
- A -4
B -2
C 2
D 6

- 40 Diagram 19 shows the graph of function on a Cartesian plane.

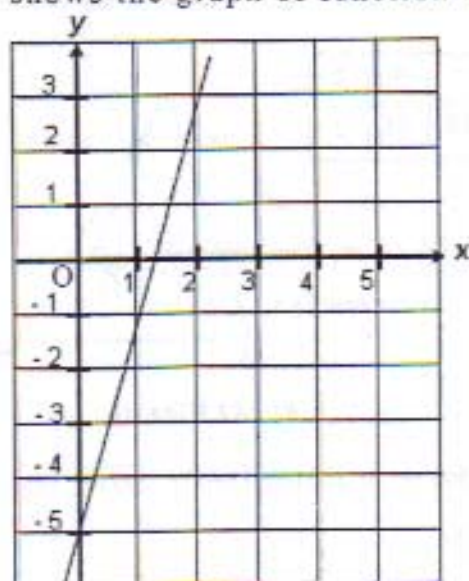


DIAGRAM 19

The equation that represents the function is

- A $y = -4x - 5$
- B $y = -4x + 5$
- C $y = 4x - 5$
- D $y = 4x + 5$

END OF QUESTION PAPER