i-MODUL KECEMERLANGAN SPM SMKA 2025

PEPERIKSAAN PERCUBAAN SIJIL PELAJARAN MALAYSIA 2025

MATEMATIK **1449/1**

KERTAS 1

Ogos/Sept.

$1\frac{1}{2}$ jam **Satu jam tiga puluh minit**

JANGAN BUKA KERTAS PEPERIKSAAN INI SEHINGGA DIBERITAHU

1. *Kertas ini mengandungi* **40** *soalan dan dalam dwibahasa.*
2. *Jawab* **SEMUA** *soalan.*
3. *Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.*
4. *Satu senarai rumus disediakan di halaman* 2, 3 *dan* 4.
5. *Anda dibenarkan menggunakan kalkulator saintifik.*

Kertas peperiksaan ini mengandungi **32** halaman bercetak

NOMBOR DAN OPERASI
NUMBER AND OPERATIONS

1 $a^m \times a^n = a^{m+n}$

2 $a^m \div a^n = a^{m-n}$

3 $(a^m)^n = a^{mn}$

4 $a^{\frac{1}{n}} = \sqrt[n]{a}$

5 $a^{\frac{m}{n}} = (a^m)^{\frac{1}{n}} = (a^{\frac{1}{n}})^m$

6 $a^{\frac{m}{n}} = \sqrt[n]{a^m} = (\sqrt[n]{a})^m$

7 Faedah mudah / *Simple interest*, $I = Prt$

8 Nilai $\frac{\text{matang}}{Maturity}$ *value*, $MV = P\left(1+\frac{r}{n}\right)^{nt}$

9 Jumlah bayaran balik / *Total repayment*, $A = P + Prt$

10 $\text{Premium} = \frac{\text{Nilai muka polisi}}{\text{RM}x} \times (\text{Kadar premium per RM}x)$

$Premium = \frac{Face\ value\ of\ policy}{\text{RM}x} \times (Premium\ rate\ per\ \text{RM}x)$

11 $\text{Jumlah insurans yang harus dibeli} = \begin{pmatrix}\text{Peratusan}\\ \text{ko-insurans}\end{pmatrix} \times \begin{pmatrix}\text{Nilai boleh}\\ \text{insurans harta}\end{pmatrix}$

$Amount\ of\ required\ insurance = \begin{pmatrix}Percentage\ of\\ co\text{-}insurance\end{pmatrix} \times \begin{pmatrix}Insurable\ value\\ of\ property\end{pmatrix}$

PERKAITAN DAN ALGEBRA
RELATIONSHIP AND ALGEBRA

1 Jarak/*Distance*
$= \sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

2 Titik Tengah / *midpoint*,
$(x, y) = \left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

3 $\text{Laju Purata} = \frac{\text{Jumlah jarak}}{\text{Jumlah masa}}$

$Average\ speed = \frac{Total\ distance}{Total\ time}$

4 $m = \frac{y_2-y_1}{x_2-x_1}$

5 $A^{-1} = \frac{1}{ad-bc}\begin{pmatrix} d & -b \\ -c & a \end{pmatrix}$

6 $m = -\frac{\text{pintasan-}y}{\text{pintasan-}x}$

$m = -\frac{y\text{-intercept}}{x\text{-intercept}}$

SUKATAN DAN GEOMETRI
MEASUREMENT AND GEOMETRY

1 Teorem Pythagoras / *Pythagoras Theorem* $c^2 = a^2 + b^2$

2 Hasil tambah sudut pedalaman poligon / *Sum of interior angles of a polygon*
$= (n - 2) \times 180^\circ$

3 Lilitan bulatan $= \pi d = 2\pi j$
Circumference of circle $= \pi d = 2\pi r$

4 Luas bulatan $= \pi j^2$
Area of circle $= \pi r^2$

5 $\dfrac{\text{Panjang lengkok}}{2\pi j} = \dfrac{\theta}{360^\circ}$

$\dfrac{\textit{Arc length}}{2\pi r} = \dfrac{\theta}{360^\circ}$

6 $\dfrac{\text{Luas sektor}}{\pi j^2} = \dfrac{\theta}{360^\circ}$

$\dfrac{\textit{Area of sector}}{\pi r^2} = \dfrac{\theta}{360^\circ}$

7 Luas lelayang $= \dfrac{1}{2} \times$ hasil darab panjang dua pepenjuru

Area of kite $= \dfrac{1}{2} \times$ *product of two diagonals*

8 Luas trapezium $= \dfrac{1}{2} \times$ hasil tambah dua sisi selari $\times$ tinggi

Area of trapezium $= \dfrac{1}{2} \times$ *sum of parallel sides* $\times$ *height*

9 Luas permukaan silinder $= 2\pi j^2 + 2\pi jt$
Surface area of cylinder $= 2\pi r^2 + 2\pi rh$

10 Luas permukaan kon $= \pi j^2 + \pi js$
Surface area of cone $= \pi r^2 + \pi rs$

11 Luas permukaan sfera $= 4\pi j^2$
Surface area of sphere $= 4\pi r^2$

12 Isi padu prisma tegak = luas keratan rentas $\times$ tinggi
Volume of right prism = cross sectional area $\times$ *height*

13 Isi padu silinder $= \pi j^2 t$
Volume of cylinder $= \pi r^2 h$

[Lihat halaman sebelah
TERHAD

14 Isi padu kon = $\frac{1}{3}\pi j^2 t$

Volume of cone = $\frac{1}{3}\pi r^2 h$

15 Isi padu sfera = $\frac{4}{3}\pi j^3$

Volume of sphere = $\frac{4}{3}\pi r^3$

16 Isi padu piramid tegak = $\frac{1}{3}$ × luas tapak × tinggi

Volume of right pyramid = $\frac{1}{3}$ × *base area* × *height*

17 Faktor skala, $k = \frac{PA'}{PA}$

Scale factor, $k = \frac{PA'}{PA}$

18 Luas imej = k^2 × luas objek
Area of image = k^2 × *area of object*

STATISTIK DAN KEBARANGKALIAN
STATISTICS AND PROBABILITY

1 Min / *Mean*, $\bar{x} = \frac{\sum x}{N}$

2 Min / *Mean*, $\bar{x} = \frac{\sum fx}{f}$

3 Varians / *Variance*, $\sigma^2 = \frac{\sum (x-\bar{x})^2}{N} = \frac{\sum x^2}{N} - \bar{x}^2$

4 Varians / *Variance*, $\sigma^2 = \frac{\sum f(x-\bar{x})^2}{\sum f} = \frac{\sum fx^2}{\sum f} - \bar{x}^2$

5 Sisihan piawai / *Standard deviation*, $\sigma = \sqrt{\frac{\sum (x-\bar{x})^2}{N}} = \sqrt{\frac{\sum x^2}{N} - \bar{x}^2}$

6 Sisihan piawai / *Standard deviation*, $\sigma = \sqrt{\frac{\sum f(x-\bar{x})^2}{\sum f}} = \sqrt{\frac{\sum fx^2}{\sum f} - \bar{x}^2}$

7 $P(A) = \frac{n(A)}{n(s)}$

8 $P(A') = 1 - P(A)$

1 Sebuah padang yang berbentuk segiempat tepat berukuran 45 m panjang dan 25 m lebar. Hitung jumlah perimeter, dalam cm, pagar dawai yang diperlukan untuk memagar padang itu. Nyatakan jawapan dalam bentuk piawai.

A rectangular field is 45 m *long and* 25 m *wide. Calculate the total perimeter, in* cm, *of wire fence required to enclose the field. Express the answer in standard form.*

A 1.4×10^3

B 1.4×10^4

C 7.0×10^3

D 7.0×10^4

2 Ringkaskan:

Simplify:

$$\left(64h^6k^{-8}\right)^{\frac{1}{2}} \div 4h^{-1}k^3$$

A $2h^4k^{-7}$

B $2h^4k^7$

C $2h^2k^{-7}$

D $2h^2k^{-1}$

3 Suhu, S berubah secara langsung dengan jisim, j dan secara songsang dengan kuasa dua masa, t. Diberi bahawa $S = 20$ apabila $j = 4$ dan $t = 2$.

Berapakah nilai S apabila $j = 6$ dan $t = 3$?

The temperature, S varies directly with the mass, j inversely with the square of the time, t. Given that $S = 20$ *when* $j = 4$ *and* $t = 2$.

What is the value of S when $j = 6$ *and* $t = 3$?

A $\frac{20}{3}$

B $\frac{40}{3}$

C 20

D 40

4 Jadual 1 menunjukkan beberapa nilai pemboleh ubah x dan y.

Table 1 shows some values of the variable x and y.

x	$\frac{1}{4}$	4
y	5	p

Jadual / *Table* 1

Diberi bahawa x berubah secara songsang dengan kuasa dua y. Cari nilai p.

It is given that x varies inversely as the square of y. Find the value of p.

A $\frac{25}{4}$

B $\frac{9}{5}$

C $\frac{7}{4}$

D $\frac{5}{4}$

5 Diberi $2k+1<9$ dengan keadaan k ialah integer, cari nilai terbesar bagi k.

Given $2k+1<9$ *where k is an integer, find the largest value of k.*

A 2

B 3

C 4

D 5

6 Diberi bahawa $A=\begin{pmatrix}3 & 5\\ -2 & 4\end{pmatrix}$ dan $B=\begin{pmatrix}1 & -3\\ 0 & 2\end{pmatrix}$. Cari matrik C jika $C=A-2B$.

Given that $A=\begin{pmatrix}3 & 5\\ -2 & 4\end{pmatrix}$ *and* $B=\begin{pmatrix}1 & -3\\ 0 & 2\end{pmatrix}$. *Find matrix C if* $C=A-2B$.

A $\begin{pmatrix}1 & 11\\ -2 & 0\end{pmatrix}$

B $\begin{pmatrix}1 & 11\\ -2 & 8\end{pmatrix}$

C $\begin{pmatrix}1 & -1\\ -2 & 0\end{pmatrix}$

D $\begin{pmatrix}5 & 11\\ -2 & 0\end{pmatrix}$

7 Diberi $M=\begin{pmatrix}8 & -6 & 2\\ -4 & 3 & 7\\ 0 & 5 & 9\end{pmatrix}$. Cari nilai bagi $m_{21}+m_{32}$.

Given $M=\begin{pmatrix}8 & -6 & 2\\ -4 & 3 & 7\\ 0 & 5 & 9\end{pmatrix}$. *Find the value of* $m_{21}+m_{32}$.

A -2

B -1

C 1

D 3

8 Diberi $P=\begin{pmatrix}1 & 3\\ 2x & 4\end{pmatrix}$, $Q=\begin{pmatrix}-1\\ 2\end{pmatrix}$ dan $PQ=\begin{pmatrix}5\\ 20\end{pmatrix}$. Tentukan nilai x.

Given $P=\begin{pmatrix}1 & 3\\ 2x & 4\end{pmatrix}$, $Q=\begin{pmatrix}-1\\ 2\end{pmatrix}$ *and* $PQ=\begin{pmatrix}5\\ 20\end{pmatrix}$. *Determine the value of* x.

A -8

B -6

C 6

D 4

9 Amie, Betty dan Candra menerima komisyen daripada jualan produk minyak wangi dalam nisbah $2:p-6:5$. Jika Candra menerima RM124.50 lebih daripada Amie dan jumlah komisyen yang diterima oleh ketiga-tiga orang penjual itu ialah RM622.50.
Kira nilai p.

Amie, Betty and Candra receive commissions from the sale of perfume products in the ratio of $2:p-6:5$. *If Candra receives* RM124.50 *more than Amie and the total commissions received by the three sellers are* RM622.50. *Calculate the value of* p.

A 14

B 12

C 10

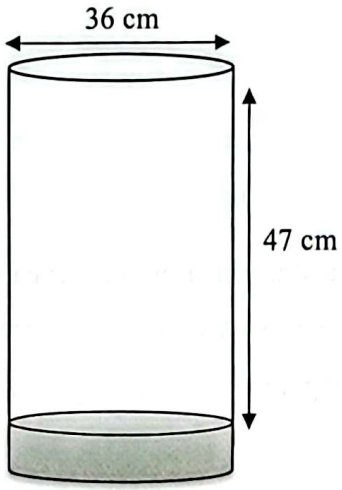
D 8

10 Rajah 1 menunjukkan sebuah balang minuman berbentuk silinder. Royyan telah mengisi air minuman berperisa sehingga $\frac{3}{4}$ penuh balang tersebut untuk dihidangkan kepada tetamu. Selepas 30 minit, jumlah air telah menyusut sebanyak 40 % daripada jumlah asal kerana telah diminum oleh tetamu dengan menggunakan gelas yang berisipadu 346.5 ml, hitung anggaran bilangan gelas yang telah digunakan.

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

Diagram 4 *shows a cylindrical beverage jar. Royyan has filled the jar with flavored water until it is* $\frac{3}{4}$ *full to serve to the guests. After* 30 *minutes, the amount of water has shrunk by* 40 % *of the original amount because the guests have drunk it using glasses with a volume of* 346.5 ml, *calculate the approximate number of glasses used.*

(*Use* $\pi = \frac{22}{7}$).



Rajah 1/ *Diagram* 1

A 40

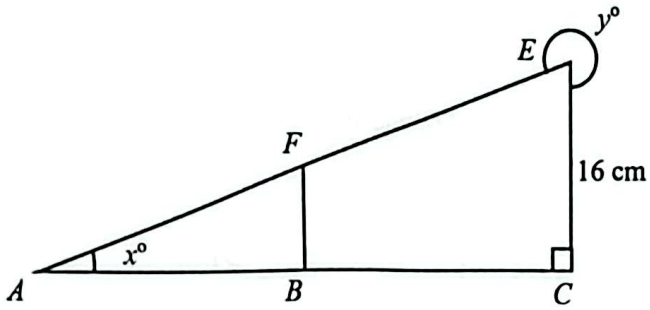
B 41

C 42

D 43

11 Dalam Rajah 2, segitiga *ABF* dan *ACE* adalah serupa.

In Diagram 2, triangles ABF and ACE are similar.



Rajah / *Diagram* 2

Diberi $\tan x = \frac{8}{15}$, hitung nilai kos *y*.

Given that $\tan x = \frac{8}{15}$ *calculate the value of cos y.*

A $\frac{8}{17}$

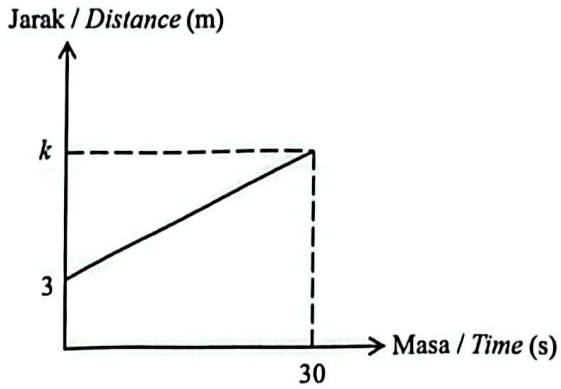
B $\frac{15}{17}$

C $-\frac{8}{17}$

D $-\frac{15}{17}$

12 Rajah 3 menunjukkan graf jarak-masa bagi Ali dalam acara sukan tahunan sekolah baru-baru ini.

Diagram 3 shows a distance-time graph for Ali in the recent annual school sports event.



Rajah / *Diagram* 3

Diberi bahawa Ali berlari dengan laju 9 ms^{-1}, berapakah nilai k?

Given that Ali runs at a speed of 9 ms^{-1}, *what is the value of* k?

A 10

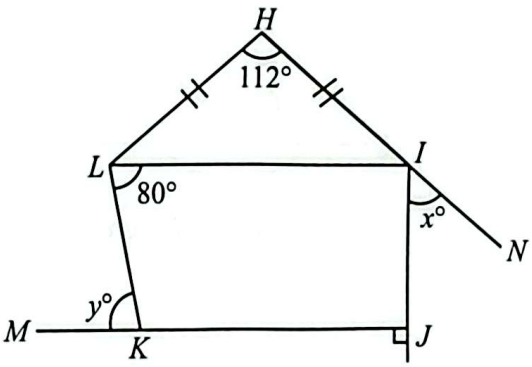
B 90

C 185

D 273

13 Dalam Rajah 4, *HIJKL* ialah pentagon, dan *HIL* ialah segi tiga sama kaki. *HIN* dan *JKM* ialah garis lurus.

In Diagram 4, HIJKL is a pentagon, and HIL is an isosceles triangle. HIN and JKM are straight lines.



Rajah / *Diagram* 4

Cari nilai $x + y$.

Find the value of $x + y$.

A 146°

B 136°

C 126°

D 116°

14 Faktorkan $(x + 2)^2 = 2x + 7$.

Factorise $(x + 2)^2 = 2x + 7$.

A $(x - 1)(x - 3)$

B $(x + 1)(x + 3)$

C $(x + 1)(x - 3)$

D $(x - 1)(x + 3)$

15 Diberi $1122_3 + x_7 = 118_9$. Hitung nilai x.

Given $1122_3 + x_7 = 118_9$. *Find the value of* x.

A 54

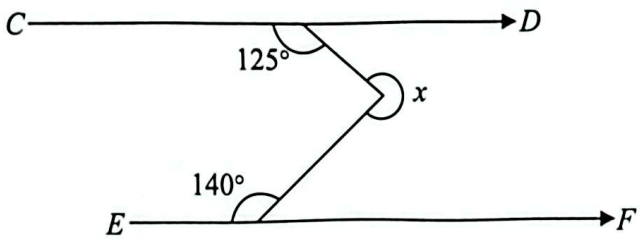
B 98

C 105

D 262

16 Dalam Rajah 5, *CD* adalah selari dengan *EF*.

In Diagram 5, CD is parallel to EF.



Rajah / *Diagram* 5

Cari nilai *x*.

Find the value of x.

A 265°

B 270°

C 275°

D 280°

17 Diberi $16a^2 - b = 2c$, maka $a =$

Given $16a^2 - b = 2c$, *then* $a =$

A $\frac{\sqrt{2c-b}}{16}$

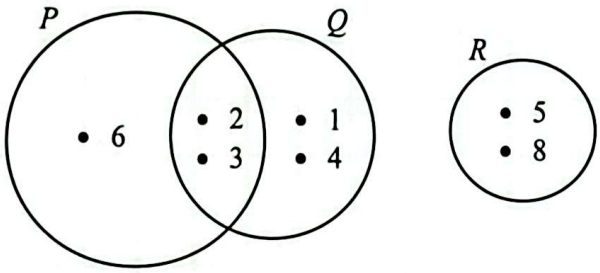
B $\frac{\sqrt{2c+b}}{16}$

C $\frac{\sqrt{2c-b}}{4}$

D $\frac{\sqrt{2c+b}}{4}$

18 Dalam gambar rajah Venn di bawah, diberi set semesta $\xi = P \cup Q \cup R$.

In the Venn diagram below, given that the universal set $\xi = P \cup Q \cup R$.



Rajah / *Diagram* 6

Senaraikan semua unsur bagi set $(P \cap Q)'$.

List all the elements of set $(P \cap Q)'$.

A $\{1, 4, 5, 6, 8\}$

B $\{1, 4, 6\}$

C $\{5, 8\}$

D $\{1, 4\}$

19 Lengkapkan Premis 2 dalam hujah berikut.

Complete Premise 2 in the following argument.

Premis 1: Jika $x = 5$, maka $x - 5 = 0$

Premise 1: *If* $x = 5$, *then* $x - 5 = 0$

Premis / *Premise* 2: .....

Kesimpulan/ *Conslusion*: $x \neq 5$

A $x = 5$

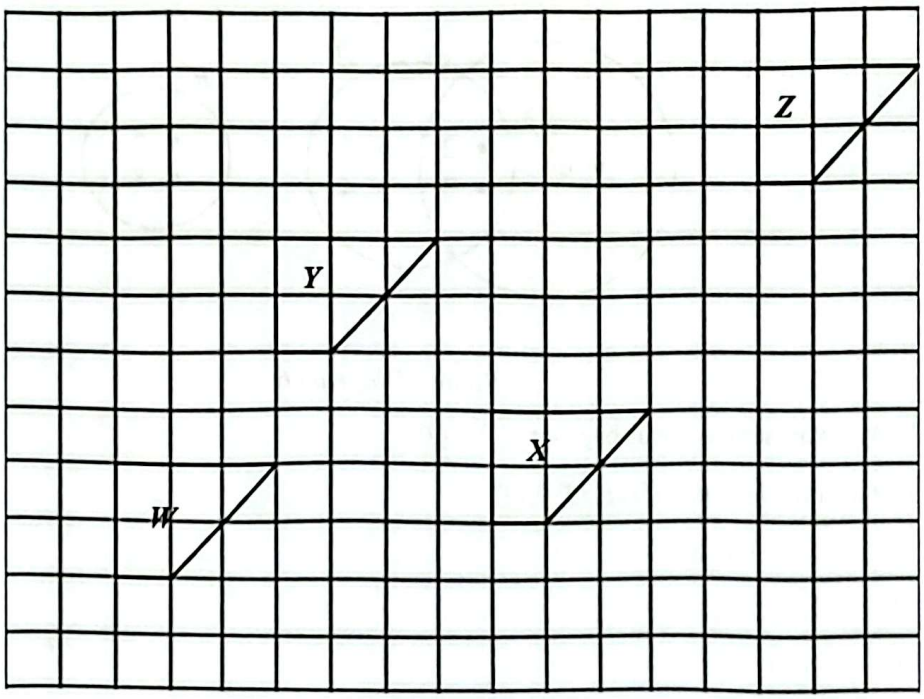
B $x - 5 = 0$

C $5 \neq 0$

D $x - 5 \neq 0$

20 Rajah 7 menunjukkan sisi empat W, X, Y dan Z yang dilukis pada grid segi empat sama.

Diagram 7 shows a quadrilateral W, X, Y and Z drawn on a square grid.



Rajah / *Diagram* 7

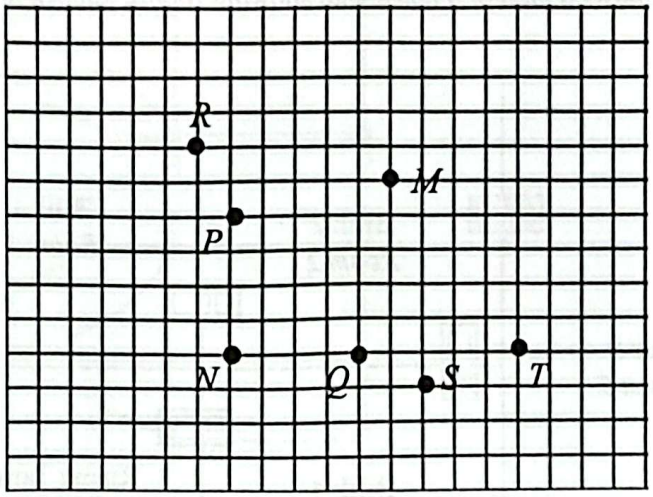
Antara translasi berikut, yang manakah betul?

Which of the following translations is correct?

	Objek *Object*	Imej *Image*	Translasi *Translation*
A	X	Y	$\begin{pmatrix} 4 \\ -3 \end{pmatrix}$
B	Z	X	$\begin{pmatrix} -4 \\ 6 \end{pmatrix}$
C	Y	W	$\begin{pmatrix} 4 \\ 4 \end{pmatrix}$
D	W	Z	$\begin{pmatrix} 12 \\ 7 \end{pmatrix}$

21 Rajah 8 menunjukkan titik N ialah imej bagi titik M di bawah suatu pantulan.

Diagram 8 shows point N is an image of point M under a reflection.



Rajah / *Diagram* 8

Antara berikut yang manakah merupakan paksi pantulan?

Which of the following is the axis of reflection?

A PQ

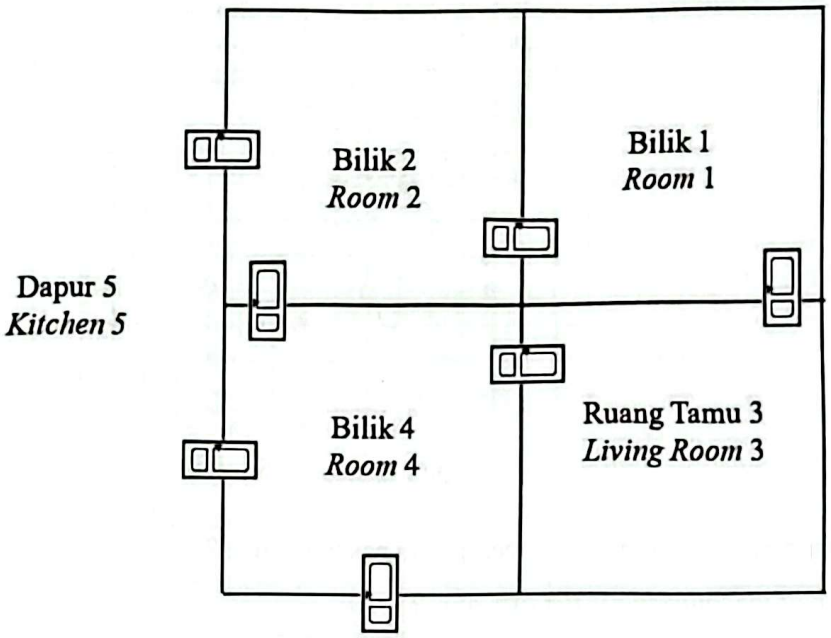
B RS

C RT

D PS

22 Rajah 9 menunjukkan pelan sebuah rumah yang menunjukkan bilik-bilik, dapur dan ruang tamu.

Diagram 9 shows a plan of a house that showing rooms, kitchen and living room.

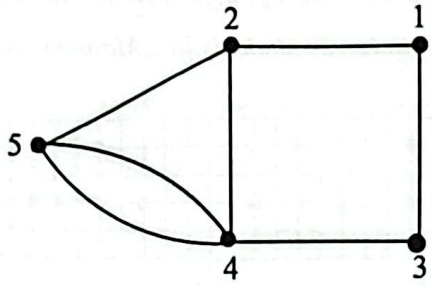


Rajah / *Diagram* 9

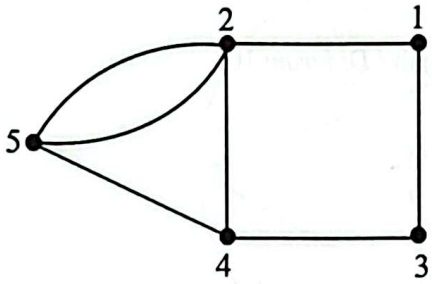
Antara rangkaian yang berikut, yang manakah menunjukkan sambungan antara bilik, dapur dan ruang tamu?

Which of the following networks shows the connection between the rooms, the kitchen and the living room?

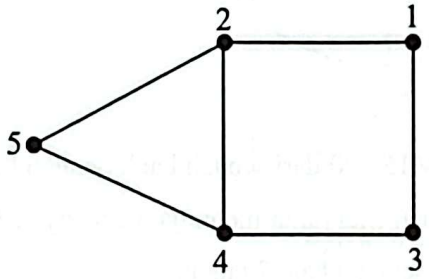
A



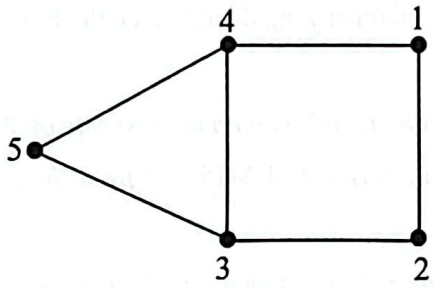
B



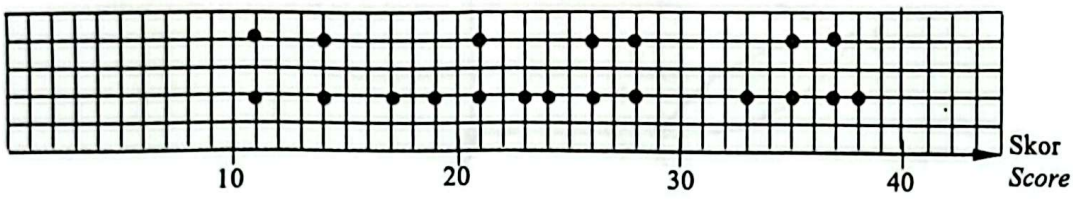
C



D



23 Rajah 10 menunjukkan plot titik bagi skor 20 orang murid dalam suatu Kuiz Matematik.
Diagram 10 shows the dot plot of scores for 20 students in a Mathematics quiz.



Rajah / *Diagram* 10

Cari julat markah bagi kuiz tersebut.
Find the range mark for the quiz.

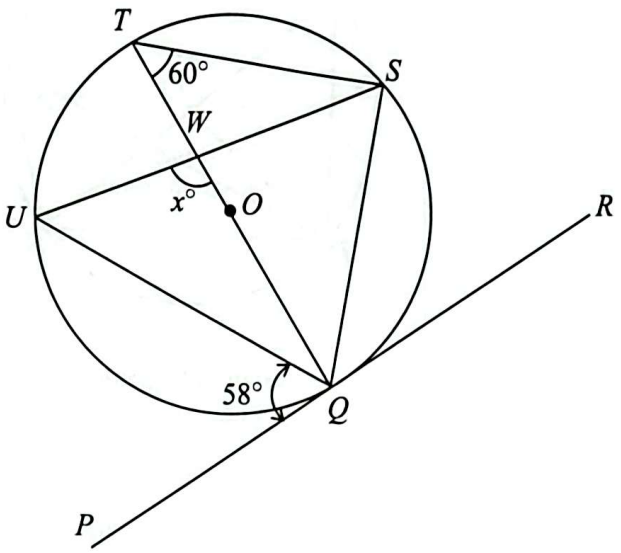
A 14
B 20
C 27
D 30

24 Puan Alissa meminjam sebanyak RM15 000 dari sebuah bank dengan kadar faedah 3% setahun bagi 5 tahun. Manakala, Puan Maryama meminjam sebanyak RM15 000 dari bank yang sama dengan kadar 3.5% setahun bagi 7 tahun.
Nyatakan perbezaan antara jumlah pinjaman yang dibayar oleh Puan Alissa dengan Puan Maryama.
Puan Alissa borrowed RM15 000 *from a bank with an interest rate of* 3% *per annum for* 5 *years. Meanwhile, Puan Maryama borrowed* RM15 000 *from the same bank with a rate of* 3.5% *per annum for* 7 *years.*
State the difference between the total loan amount paid by Puan Alissa and Puan Maryama.

A RM1 350
B RM1 425
C RM1 472
D RM6 000

25 Dalam Rajah 11, *PQR* ialah tangen kepada bulatan *QSTU* berpusat *O*, di *Q*. *TOQ* ialah diameter bagi bulatan itu dan *UWS* ialah garis lurus.

In Diagram 11, *PQR is a tangent to the circle QSTU with centre O, at Q. TOQ is a diameter to the circle and UWS is a straight line.*



Rajah / *Diagram* 11

Nilai x ialah

The value of x is

A 68°

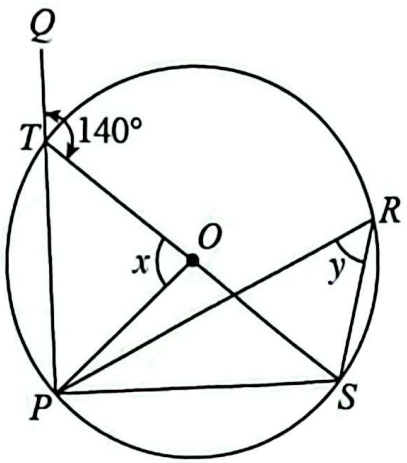
B 78°

C 88°

D 98°

26 Rajah 12 menunjukkan *PTQ* ialah garis lurus, dan *O* ialah pusat bulatan.

Diagram 12 *shows that PTQ is a straight line, and O is the centre of the circle.*



Rajah / *Diagram* 12

Cari nilai $x + y$.

Find the value of $x + y$.

A 140°

B 120°

C 100°

D 80°

27 Jadual 2 menunjukkan sebahagian daripada kadar premium bagi polisi motor yang dikeluarkan di Malaysia.

Table 2 shows part of the premium rates for motor policies issued in Malaysia.

Kapasiti enjin tidak melebihi (cc) *Engine capacity not exceeding* (cc)	**Sabah dan Sarawak** *Sabah and Sarawak*	
	Polisi komprehensif (RM) *Comprehensive policy* (RM)	**Polisi pihak ketiga (RM)** *Third party policy* (RM)
2 200	243.90	85.20
3 050	266.50	93.60

Jadual / *Table* 2

Encik Hanif mempunyai sebuah kereta yang berkapasiti 2 500 cc di Ranau. Dia ingin menginsuranskan keretanya dibawah polisi pihak ketiga. Nilai Diskaun Tanpa Tuntutan (NCD) Encik Hanif ialah 45%.

Hitung premium kasar yang perlu dibayar oleh Encik Hanif.

Encik Hanif owns a car with a capacity of 2 500 cc *in Ranau. He wants to insure his car under a third-party policy. Encik Hanif's No Claims Discount* (NCD) *value is* 45%.

Calculate the gross premium payable by Encik Hanif.

A RM42.12

B RM51.48

C RM119.93

D RM146.58

28 Permudahkan

Simplify

$$\frac{4s^2-1}{s^2-1}\times\frac{st+t}{4s-2}$$

A $\dfrac{t(2s-2)}{2(s+1)}$

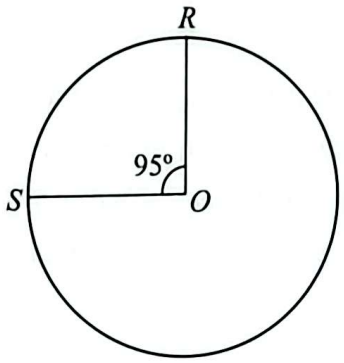
B $\dfrac{s(2t-1)}{2(s+2)}$

C $\dfrac{s(2t-1)}{(s-1)}$

D $\dfrac{t(2s+1)}{2(s-1)}$

29 Rajah 13 menunjukkan sebuah bulatan berpusat di *O*. Diberi jejari bulatan adalah 28 mm.

Diagram 11 *shows a circle centred at O. Given that the radius of the circle is* 28 mm.



Rajah / *Diagram* 13

Hitung luas, dalam mm^2, sektor major *ROS*. (Guna $\pi = 3.142$)

Calculate the area, in mm^2, *of the major sector ROS*. (Use $\pi = 3.142$).

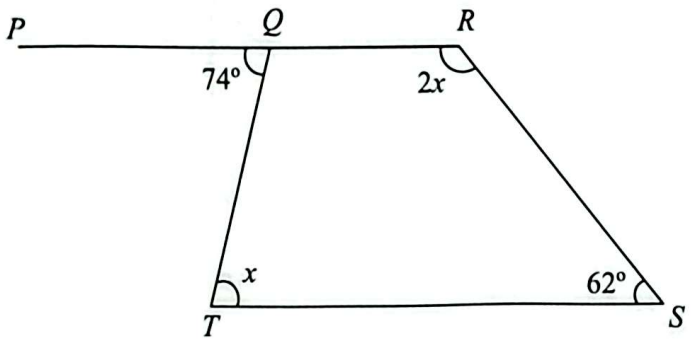
A 46.43

B 129.52

C 650.04

D 1813.28

30 Rajah 14 menunjukkan sebuah sisi empat *QRST* dan *PQR* ialah garis lurus.
Diagram 14 *shows a quadrilateral QRST and PQR is a straight line.*

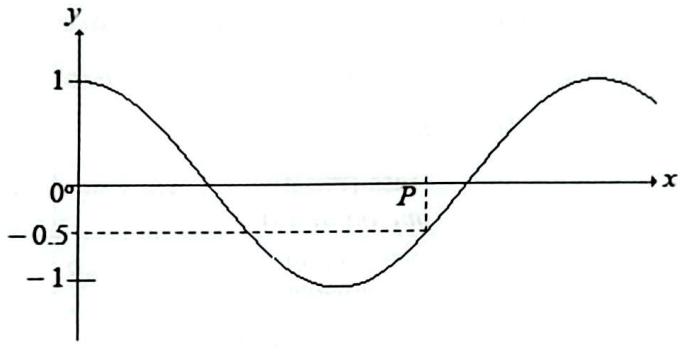


Rajah / *Diagram* 14

Cari nilai *x*.
Find the value of x.

A 60
B 62
C 64
D 66

31 Rajah 15 menunjukkan graf $y = \text{kos } x°$.
Diagram 15 *shows a graph* $y = \text{kos } x°$.



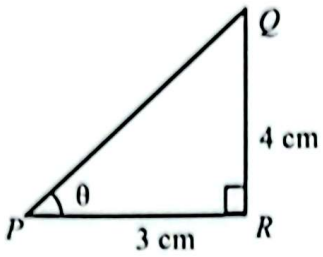
Rajah / *Diagram* 15

Nilai *P* ialah
The value of P is

A 60°
B 120°
C 180°
D 240°

32 Rajah 16 menunjukkan sebuah segi tiga bersudut tegak PQR.

Diagram 16 shows a right-angled triangle PQR.



Rajah / *Diagram* 16

Nyatakan $\sin \theta - \text{kos } \theta$.

State $\sin \theta - \cos \theta$.

A $\frac{5}{4} - \frac{3}{4}$

B $\frac{4}{5} - \frac{3}{5}$

C $\frac{4}{3} - \frac{5}{4}$

D $\frac{5}{4} - \frac{3}{5}$

33 Jadual 3 menunjukkan masa yang diambil untuk menjawab teka silang kata oleh sekumpulan murid dalam aktiviti Persatuan Bahasa Melayu.

Table 3 shows the time taken to answer crossword puzzles by a group of students in a Malay Language Association activity.

Masa (minit) *Time (minutes)*	10	20	30	40
Kekerapan *Frequency*	2	$\sqrt{p}$	5	1

Jadual / *Table* 3

Diberi min data ialah $\frac{145}{6}$. Cari nilai p.

Given the mean of data is $\frac{145}{6}$. *Find the value of p.*

A 16

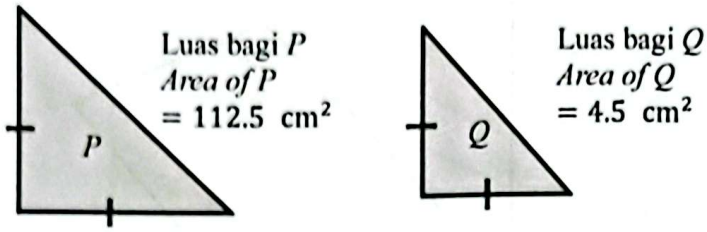
B 12

C 8

D 4

34 Rajah 17 menunjukkan segi tiga P yang merupakan lukisan berskala bagi segi tiga Q dengan skala $1 : n$.

Diagram 17 shows triangle P which is the scale drawing of triangle Q with a scale of $1 : n$.



Rajah / *Diagram* 17

Hitung nilai n.

Calculate the value of n.

A 5

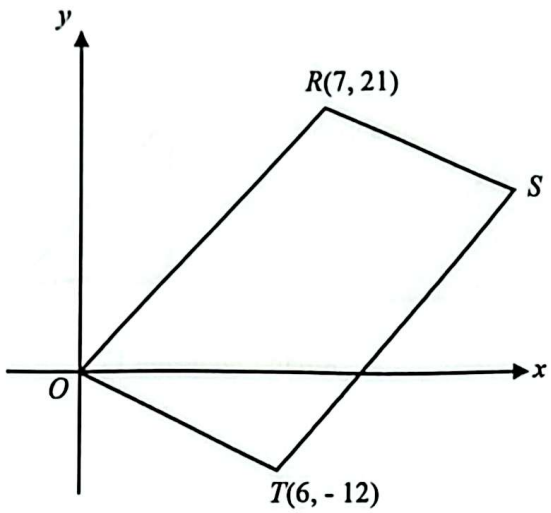
B 25

C $\frac{1}{5}$

D $\frac{1}{25}$

35 Rajah 18 menunjukkan segi empat selari *ORST*. Diberi *O* ialah asalan.

Diagram 18 *shows a parallelogram ORST. Given that O is the origin.*



Rajah /*Diagram* 15

Tentukan persamaan garis lurus *RS*.

Determine the equation of the straight line RS.

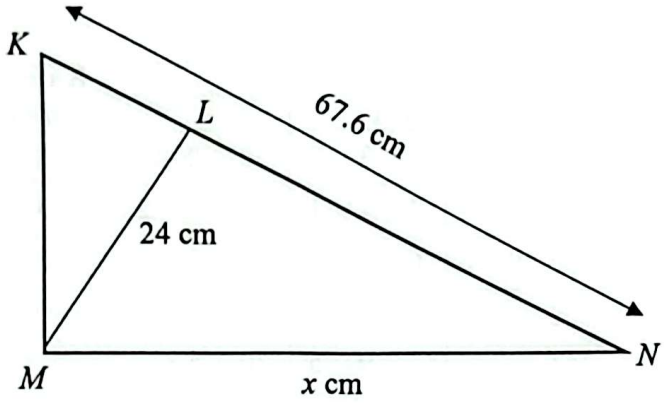
A $y = x + 7$

B $y = 2x - 24$

C $y = -2x + 35$

D $y = -x - 24$

36 Dalam Rajah 19 di bawah, *KMN*, *KLM* dan *MLN* ialah segi tiga bersudut tegak.
In Diagram 19 *below, KMN*, *KLM* and *MLN are right-angled triangles.*



Rajah / *Diagram* 19

Diberi $KL = \frac{5}{12} LM$, hitung nilai x.

Given $KL = \frac{5}{12} LM$, *calculate the value of* x.

A 62.4

B 57.6

C 42.6

D 31.4

37 Rajah 20 menunjukkan plot batang-dan-daun bagi jumlah hasil jualan makanan (RM) di dua buah kafe dalam 20 hari.

Diagram 20 *shows the stem-and-leaf plot for total of food sales* (RM) *at two cafes in* 20 *days.*

Kafe *A* / *Café A*						Kafe *B* / *Café B*						
	7	5	3	2	50	2	3	7	8			
5	4	2	1	1	55	1	2	2	3	5	8	9
9	8	6	4	4	60	2	4	7	8	8	9	
	4	4	2	1	65	1	2					
			9	5	70	5						

Kekunci: 2 | 50 | 2 bermaksud RM502

Key: 2 | 50 | 2 *means* RM502

Rajah / *Diagram* 20

Nyatakan beza julat antara dua kafe tersebut.

State the difference in range between the two cafes.

A 1

B 2

C 4

D 5

38 Danish bekerja sebagai seorang guru swasta. Dia menerima pendapatan sebanyak RM2 500. Jadual 4 menunjukkan perbelanjaan bulanan Danish.

Danish works as a private teacher. He receives an income of RM2 500. *Table* 38 *shows Danish's monthly expenses.*

Perbelanjaan *Expenses*	**Jumlah (RM)** *Total* (RM)
Makanan dan minuman / *Food and drink*	300
Sewa rumah / *House rental*	500
Petrol / *Petrol*	300
Zakat / *Zakat*	100
Lain-lain / *Others*	250

Jadual / *Table* 4

Tentukan jenis aliran tunai bagi Danish.

Determine the type of cash flow for Danish.

A Aliran tunai positif / *Positive cash flow*

B Aliran tunai aktif / *Active cash flow*

C Aliran tunai negatif / *Negative cash flow*

D Aliran tunai pasif / *Passive cash flow*

39 Manisah sekeluarga pergi ke taman tema air di Perak. Tiket bagi seorang dewasa ialah RM105 manakala tiket bagi seorang kanak-kanak ialah RM98. Taman tema tersebut mengenakan cukai perkhidmatan sebanyak 6%. Manisah menempah 2 tiket dewasa dan 2 tiket kanak-kanak. Hitung jumlah harga tiket yang perlu dibayar oleh Manisah selepas dikenakan caj perkhidmatan.

Manisah and her family went to the water theme park in Perak. Ticket for an adult is RM105 *while ticket for a child is* RM98. *The theme park charges a service tax of* 6%. *Manisah booked* 2 *adults' tickets and* 2 *children's tickets. Calculate the total tickets price that Manisah must pay after service tax.*

A RM406.00

B RM417.76

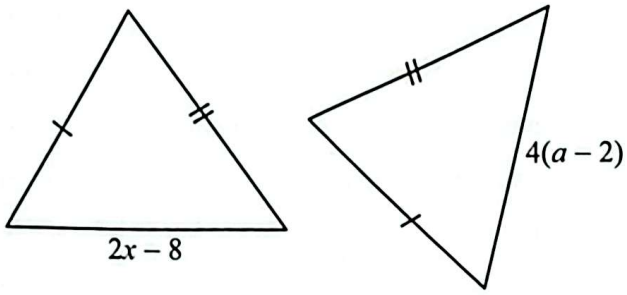
C RM418.60

D RM430.36

[Lihat halaman sebelah

40 Rajah 21 menunjukkan dua segi tiga kongruen. Diberi sifat kekongruenan segi tiga yang dipenuhi ialah Sisi-Sisi-Sisi (SSS).

Diagram 21 shows two congruent triangles. Given that the properties of triangle congruency that satisfied is Side-Side-Side (SSS).



Rajah / *Diagram* 21

Ungkapkan x dalam sebutan a.

Express x in terms of a.

A $x = \frac{1}{2}a$

B $x = 2a$

C $x = 2a - 8$

D $x = 2a + 16$

KERTAS SOALAN TAMAT

END OF THE QUESTION PAPER

MAKLUMAT UNTUK CALON
INFORMATION FOR CANDIDATES

1. Kertas soalan ini mengandungi **40** soalan.
   This question paper consists of **40** *questions.*

2. Jawab **semua** soalan.
   Answer ***all*** *questions.*

3. Jawab setiap soalan dengan menghitamkan ruangan yang betul pada kertas jawapan objektif.
   Answer each question by blackening the correct space on the objective answer sheet.

4. Hitamkan **satu** ruangan sahaja bagi setiap soalan.
   Blacken only ***one*** *space for each question.*

5. Sekiranya anda hendak menukar jawapan, padamkan tanda yang telah dibuat. Kemudian hitamkan jawapan yang baharu.
   If you wish to change your answer, erase the blackened mark that you have done. Then blacken the space for the new answer.

6. Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.
   The diagrams provided in the questions are not drawn to scale unless stated.

7. Satu senarai rumus disediakan di halaman 2 hingga 4.
   A list of formulae is provided on pages 2 *to* 4.

8. Anda dibenarkan menggunakan kalkulator saintifik yang tidak boleh diprogram.
   You may use a non-programmable scientific calculator.