

NAMA:

TINGKATAN:



MAJLIS PENGETUA SEKOLAH MALAYSIA (MPSM)
NEGERI PERAK

MODUL KECEMERLANGAN SPM 2024
SET 1

MATEMATIK

KERTAS 1
1 JAM 30 MINIT

JANGAN BUKA KERTAS PEPERIKSAAN INI SEHINGGA DIBERITAHU

ARAHAN:

1. Kertas peperiksaan ini mengandungi **40 soalan aneka pilihan**.
2. Anda dikehendaki menjawab **semua** soalan.
3. Jawab **semua** soalan dalam kertas objektif yang disediakan.
4. Kertas peperiksaan ini adalah dalam dwibahasa.
5. Calon dibenarkan menggunakan kalkulator saintifik yang tidak boleh diprogramkan.

Kertas ini mengandungi 23 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 $a^{\frac{m}{n}} = (a^{\frac{1}{n}})^m$
- 5 $a^{\frac{m}{n}} = (a^m)^{\frac{1}{n}} = \left(a^{\frac{1}{n}}\right)^m$
- 6 $a^{\frac{m}{n}} = \sqrt[n]{a^m} = \left(\sqrt[n]{a}\right)^m$
- 7 Faedah mudah / *Simple interest*,
 $I = Prt$
- 8 Nilai matang / *Maturity value*,
 $MV = P \left(1 + \frac{r}{n}\right)^{nt}$
- 9 Jumlah bayaran balik / *Total repayment*, $A = P + Prt$
- 10 $\text{Premium} = \frac{\text{Nilai muka polisi}}{\text{RMx}} \times \text{Kadar premium per RMx}$
 $\text{Premium} = \frac{\text{Face value of policy}}{\text{RMx}} \times \text{Premium rate per RMx}$
- 11 Jumlah insurans yang harus dibeli = $\left(\frac{\text{Peratusan}}{\text{ko insurans}}\right) \times \left(\frac{\text{Nilai boleh}}{\text{insurans harta}}\right)$
 $\text{Amount of required insurance} = \left(\frac{\text{Percentage of}}{\text{co-insurance}}\right) \times \left(\frac{\text{Insurable value}}{\text{of property}}\right)$

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 Purata laju = $\frac{\text{jarak yang dilalui}}{\text{masa yang diambil}}$
 $\text{Average speed} = \frac{\text{distance travelled}}{\text{time taken}}$
- 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 $= \pi d = 2\pi r$
Circumference of circle $= \pi d = 2\pi r$
- 4 Luas bulatan $= \pi r^2$
Area of circle $= \pi r^2$
- 5 $\frac{\text{Panjang lengkok}}{2\pi r} = \frac{\theta}{360^\circ}$
 $\frac{\text{Arc length}}{2\pi r} = \frac{\theta}{360^\circ}$
- 6 $\frac{\text{Luas sektor}}{\pi r^2} = \frac{\theta}{360^\circ}$
 $\frac{\text{Area of sector}}{\pi r^2} = \frac{\theta}{360^\circ}$
- 7 Luas layang-layang $= \frac{1}{2} \times$ hasil darab panjang dua pepenjuru
Area of kite $= \frac{1}{2} \times \text{product of the length of two diagonals}$
- 8 Luas trapezium $= \frac{1}{2} \times$ hasil tambah dua sisi selari $\times$ tinggi
Area of trapezium $= \frac{1}{2} \times \text{sum of parallel sides} \times \text{height}$
- 9 Luas permukaan silinder $= 2\pi r^2 + 2\pi rh$
Surface area of cylinder $= 2\pi r^2 + 2\pi rh$
- 10 Luas permukaan kon $= \pi r^2 + \pi rs$
Surface area of cone $= \pi r^2 + \pi rs$
- 11 Luas permukaan sfera $= 4\pi r^2$
Surface area of sphere $= 4\pi r^2$
- 12 Isi padu prisma tegak $=$ luas keratan rentas $\times$ tinggi
Volume of right prism $= \text{cross sectional area} \times \text{height}$

- 13 Isi padu silinder $= \pi j^2 t$
Volume of cylinder $= \pi r^2 h$
- 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 $= \frac{1}{3} \times \text{luas tapak} \times \text{tinggi}$
Volume of right pyramid $= \frac{1}{3} \times \text{base area} \times \text{height}$
- 17 Faktor skala, $k = \frac{PA'}{PA}$
Scale factor, k $= \frac{PA'}{PA}$
- 18 Luas imej $= k^2 \times \text{luas objek}$
Area of image $= k^2 \times \text{area of object}$

STATISTIK DAN KEBARANGKALIAN STATISTICS AND PROBABILITY

- 1 Min / Mean, $\bar{x} = \frac{\Sigma x}{N}$
- 2 Min / Mean, $\bar{x} = \frac{\Sigma fx}{\Sigma f}$
- 3 Varians / Variance, $\sigma^2 = \frac{\Sigma x^2}{N} - \bar{x}^2 = \frac{\Sigma (x - \bar{x})^2}{N}$
- 4 Varians / Variance, $\sigma^2 = \frac{\Sigma fx^2}{\Sigma f} - \bar{x}^2 = \frac{\Sigma f(x - \bar{x})^2}{\Sigma f}$
- 5 Sisihan piawai / Standard deviation, $\sigma = \sqrt{\frac{\Sigma x^2}{N} - \bar{x}^2} = \sqrt{\frac{\Sigma (x - \bar{x})^2}{N}}$
- 6 Sisihan piawai / Standard deviation, $\sigma = \sqrt{\frac{\Sigma fx^2}{\Sigma f} - \bar{x}^2} = \sqrt{\frac{\Sigma f(x - \bar{x})^2}{\Sigma f}}$
- 7 $P(A) = \frac{n(A)}{n(S)}$
- 8 $P(A') = 1 - P(A)$

Jawab **semua** soalan.

Answer **all** questions.

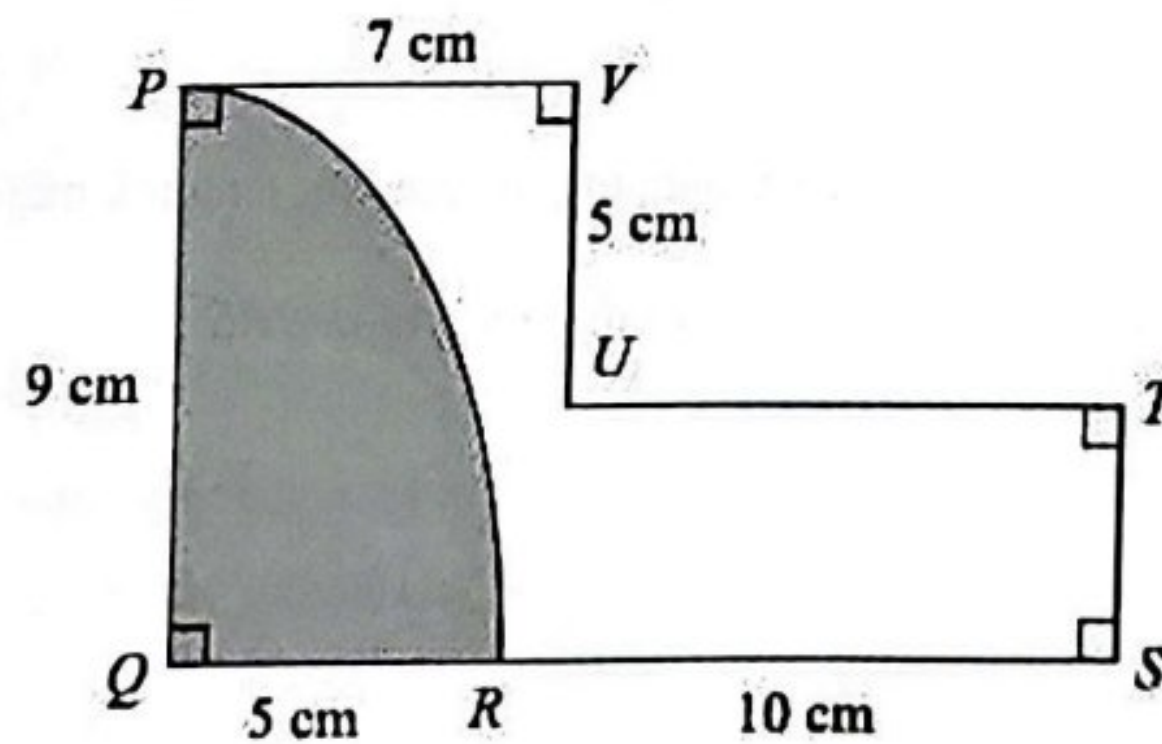
1. Maria membeli sebuah buku yang berharga RM8.90 dan dua buah fail yang sama harganya. Apabila dia membayar RM15.00 kepada juruwang, dia diberitahu bayarannya tidak mencukupi. Maria kemudian membayar lagi RM10.00 dan menerima wang baki RM7.10. Hitung harga bagi sebuah fail yang dibelinya.

Maria bought a book with a price of RM8.90 and two files that cost the same amount. When she paid RM15.00 to the cashier, she was told that the payment was not enough. Maria then paid another RM10.00 and received balance money of RM7.10. Calculate the price of a file she bought.

- A RM3.20
- B RM4.50
- C RM8.95
- D RM9.00

2. Rajah 1 menunjukkan sebuah papan permainan. Diberi perimeter rantau berlorek ialah 26 cm. Hitung perimeter rantau tidak berlorek.

Diagram 1 shows a game board. Given that the perimeter of the shaded region is 26 cm. Calculate the perimeter of the unshaded region.



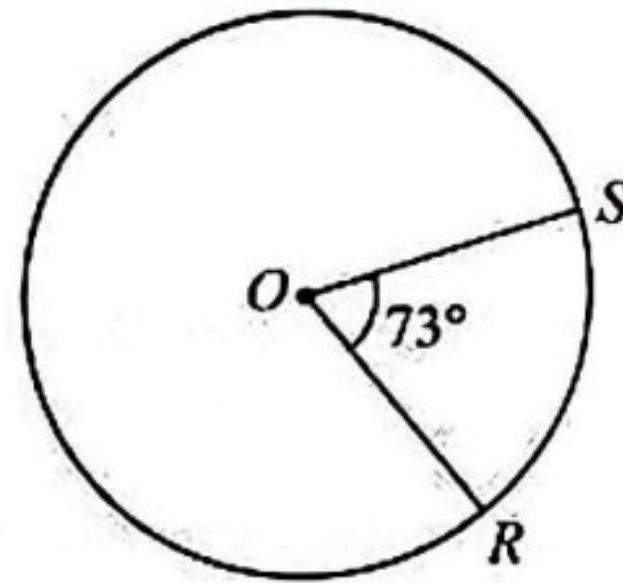
Rajah 1 / Diagram 1

- A 42 cm
- B 44 cm
- C 46 cm
- D 48 cm

3. Diberi set $K = \{x: x \text{ ialah nombor perdana dan } x < 25\}$. Antara berikut, yang manakah adalah unsur bagi set K ?

Given set $K = \{x: x \text{ is the prime number and } x < 25\}$. Which of the following are the elements of set K ?

- A $\{2, 3, 5, 7, 11, 13, 17, 19, 23\}$
 B $\{1, 2, 3, 5, 7, 11, 13, 17, 19, 23\}$
 C $\{2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24\}$
 D $\{1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23\}$
4. Rajah 2 menunjukkan sebuah bulatan berpusat di O dan berjejari 15 cm.
Diagram 2 shows a circle with centre O and radius of 15 cm.



Rajah 2 / Diagram 2

Dengan menggunakan $\pi = \frac{22}{7}$, hitung panjang, dalam cm, lengkok major RS .

By using $\pi = \frac{22}{7}$, calculate the length, in cm, of major arc RS .

- A 19.12
 B 75.17
 C 143.39
 D 563.75

5. Sebuah lori sedang bergerak dengan kelajuan 70 km/j. Ketika melalui kawasan berbukit, pemandu lori memperlahankan kelajuan lori tersebut sebanyak 35% daripada kelajuan awalnya, dalam masa 40 saat. Hitung pecutan, dalam km/j per saat, lori tersebut.

A lorry is moving at a speed of 70 km/h. While passing through hilly areas, the driver decreases the speed by 35% of its initial speed within 40 seconds. Calculate the acceleration, in km/h per seconds, of the lorry.

- A 1.1375
B 0.6125
C - 1.1375
D - 0.6125

6. Jadual 1 menunjukkan ukuran jarak, dalam meter bagi pertandingan Lontar Peluru di sebuah sekolah menengah Kategori L18.

Table 1 shows the measurement of distance, in metres for the Shot Put competition in a secondary school, Category L18.

Peserta <i>Participant</i>		Chong	Darwish	Ramu
Jarak <i>Distance</i>	1	5.5	5.6	5.5
	2	5.3	5.2	5.8
	3	6.3	6.0	6.1

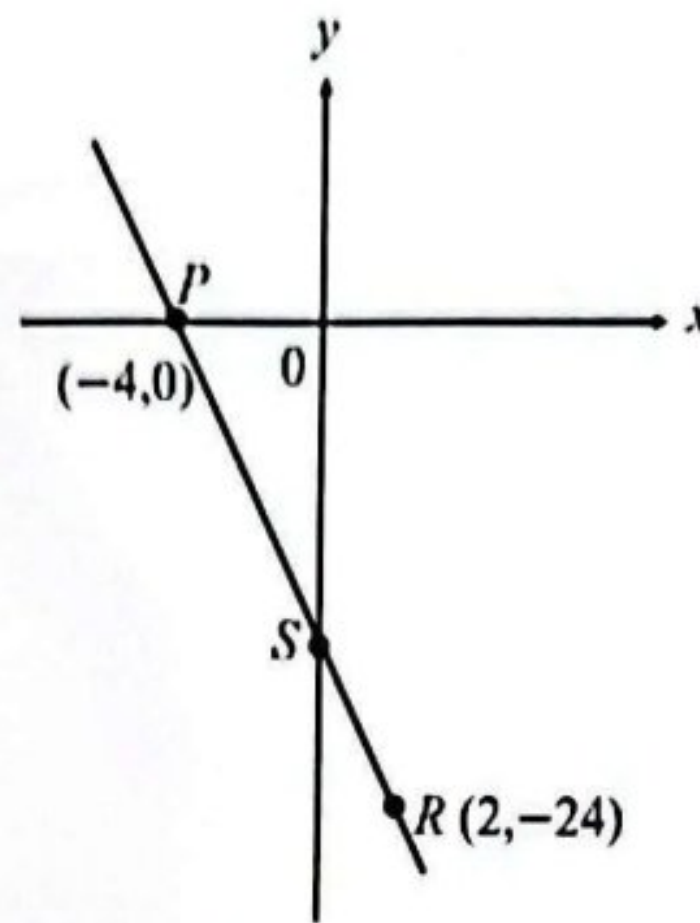
Jadual 1 / Diagram 1

Daripada data di atas siapakah pemenang pingat emas, perak dan gangsa?

From the data above, who are the winners of the gold, silver and bronze medals?

- A Ramu, Chong, Darwish
B Chong, Darwish, Ramu
C Darwish, Ramu, Chong
D Chong, Ramu, Darwish

- 7 Rajah 3 menunjukkan satu garis lurus PR dilukis pada satah Cartes.
Diagram 3 shows a straight line PR drawn on a Cartesian plane.

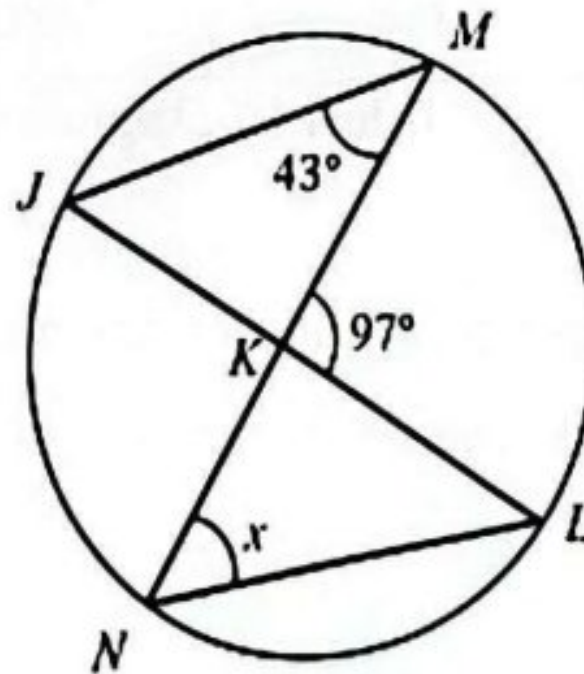


Rajah 3 / Diagram 3

Cari persamaan garis lurus PR .

Find the equation of the straight PR .

- A $y = 4x + 16$
 B $y = 4x - 16$
 C $y = -4x + 16$
 D $y = -4x - 16$
8. Rajah 4 menunjukkan suatu bulatan $JMLN$. Diberi JKL dan MKN ialah garis lurus.
Diagram 4 shows a circle $JMLN$. Given that JKL and MKN are straight lines.



Rajah 4 / Diagram 4

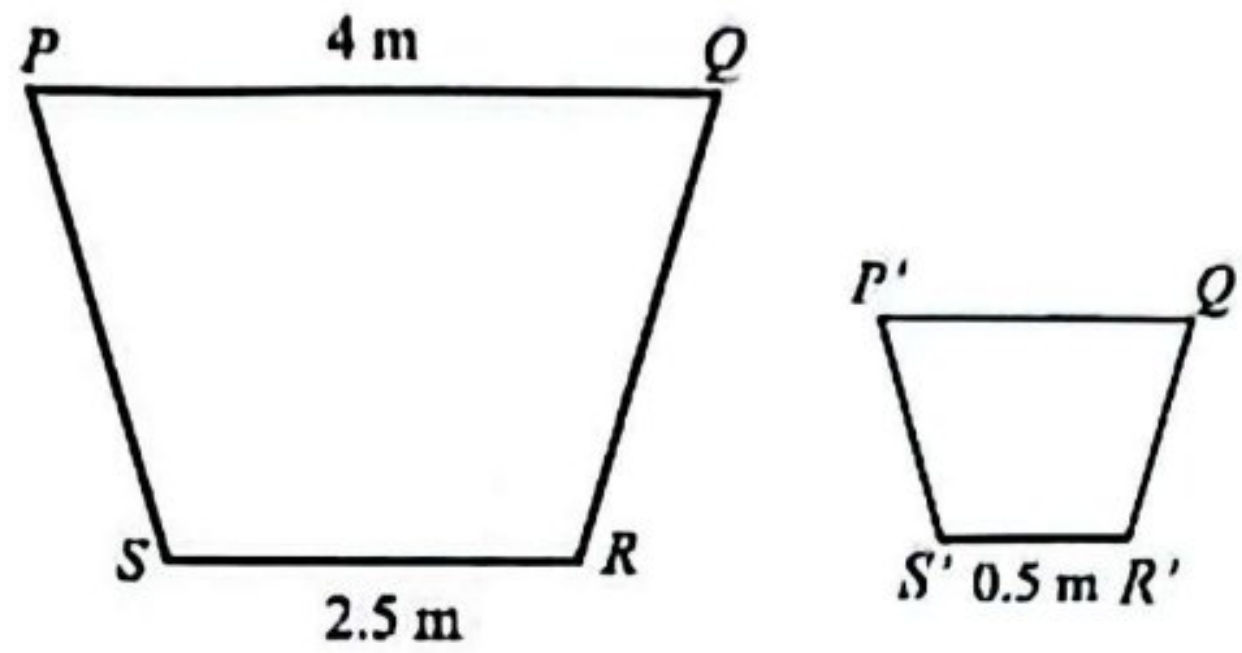
Hitungkan nilai x .

Find the value of x .

- A 40°
 B 43°
 C 45°
 D 54°

9. Dalam Rajah 5, $P'Q'R'S'$ ialah lukisan berskala bagi $PQRS$.

In Diagram 5, $P'Q'R'S'$ is the scale drawing of $PQRS$.



Rajah 5 / Diagram 5

Pilih jawapan yang betul bagi mewakili skala dan nilai $P'Q'$ di atas.

Choose the correct answers that represents the scale and value of $P'Q'$ above.

- A Skala = 1:2 dan $P'Q' = 0.8$
Scale = 1:2 and $P'Q' = 0.8$
 - B Skala = 2:1 dan $P'Q' = 0.2$
Scale = 2:1 and $P'Q' = 0.2$
 - C Skala = 1:5 dan $P'Q' = 0.8$
Scale = 1:5 and $P'Q' = 0.8$
 - D Skala = 5:1 dan $P'Q' = 0.2$
Scale = 5:1 and $P'Q' = 0.2$
- 10 Zizie memperoleh keuntungan RM7 000 hasil daripada jualan biskut raya. Dia bercadang menyimpan 85% daripada wang tersebut di dalam bank dengan kadar faedah tahunan sebanyak 4.5% untuk 3 tahun. Berapakah jumlah simpanannya pada akhir tahun ketiga?
- Zizie earned a profit of RM7 000 from selling festive cookies. She plans to save 85% of that amount in a bank with an annual interest rate of 4.5% for 3 years.*
- What is her saving at the end of the third year?*
- A RM803.25
 - B RM6 753.25
 - C RM7 803.25
 - D RM7 945.00

- 11 Ringkaskan.

Simplify.

$$\frac{6m^3 \times (2n^{-2})^3}{\sqrt[3]{27m^3n^6}}$$

- A $\frac{4m^4}{n^{-8}}$
 B $\frac{4m^4}{n^4}$
 C $\frac{16m^2}{n^8}$
 D $\frac{16m^2}{n^{-4}}$

- 12 Panjang bagi suatu segi empat tepat ialah $(x + 5)$ cm dan lebarnya ialah 6 cm kurang daripada panjangnya. Ungkapkan luas segi empat, $A \text{ cm}^2$, dalam sebutan x .

The length of a rectangle is $(x + 5)$ cm and its width is 6 cm less than its length. Express the area of the rectangle, $A \text{ cm}^2$, in terms of x .

- A $A = x^2 + 4x - 5$
 B $A = x^2 + 6x + 5$
 C $A = x^2 - 11x + 30$
 D $A = x^2 - x - 30$

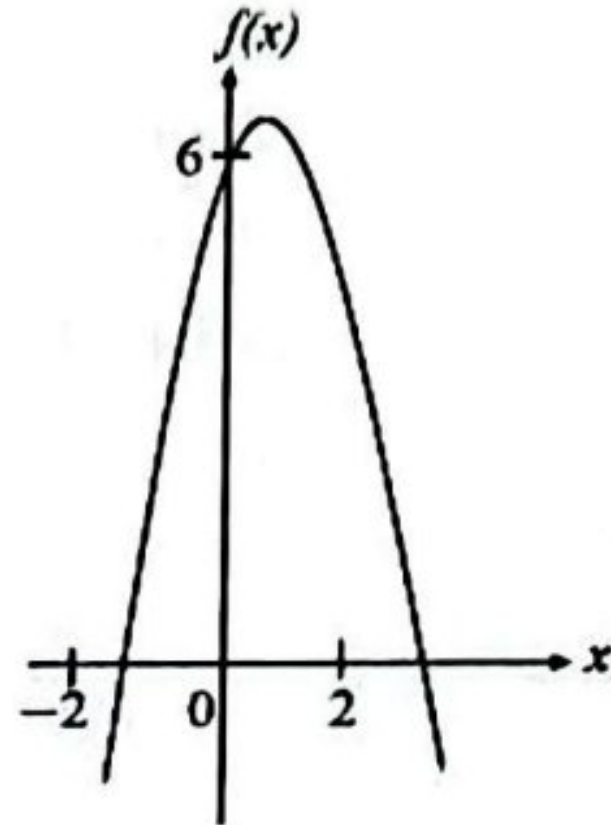
- 13 Nyatakan nilai digit 2 dalam nombor 3256_7 .

State the value of digit 2 in 3256_7 .

- A 14
 B 16
 C 28
 D 98

- 14 Rajah 6 menunjukkan fungsi kuadratik $f(x) = -2x^2 + 3x + 6$.

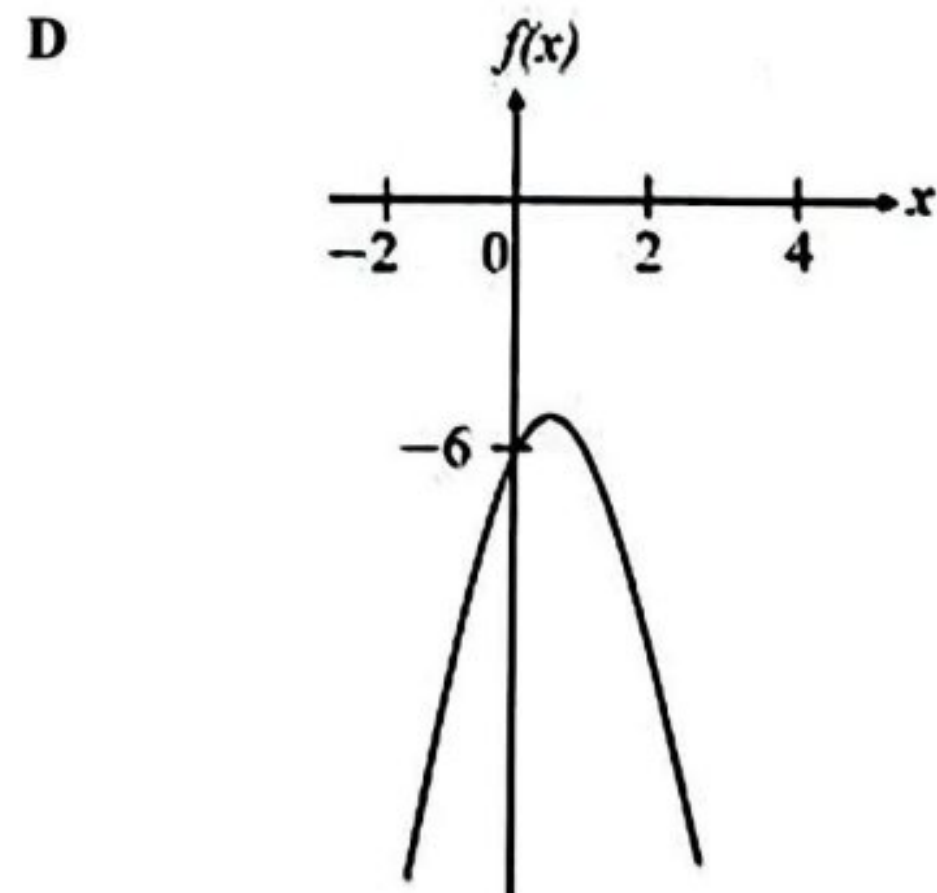
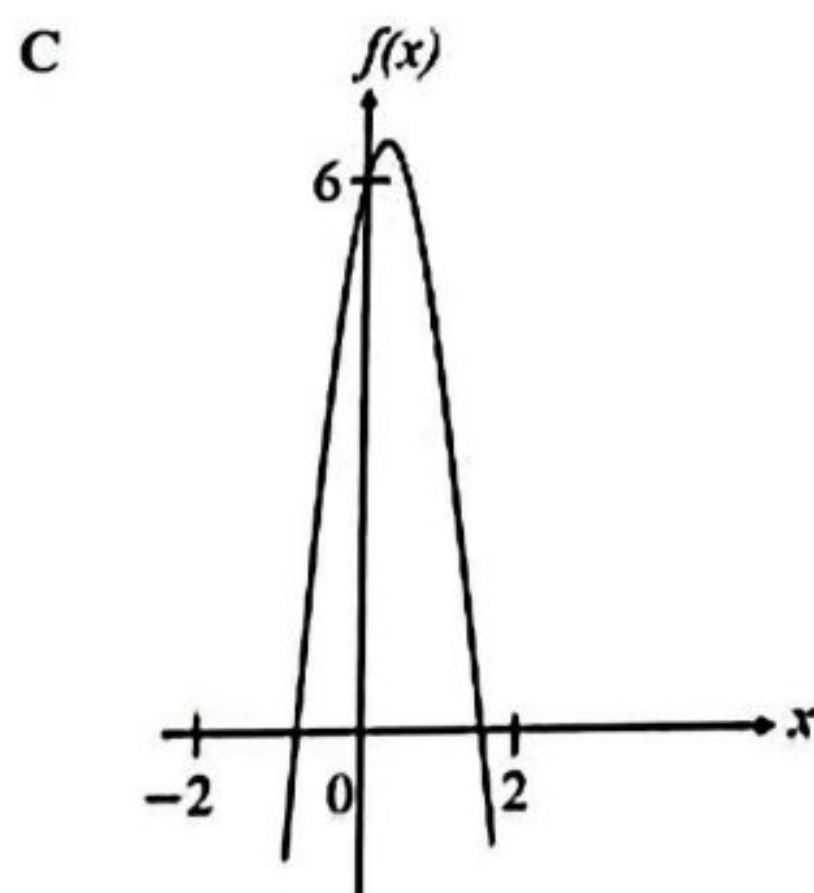
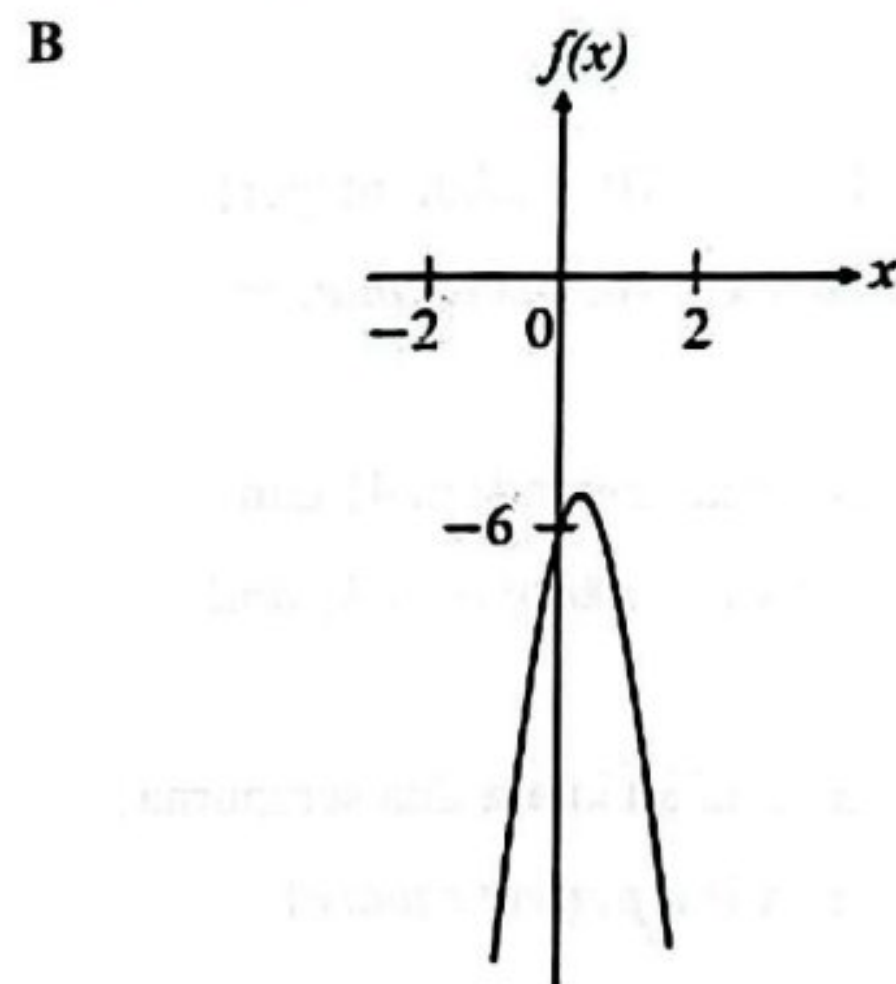
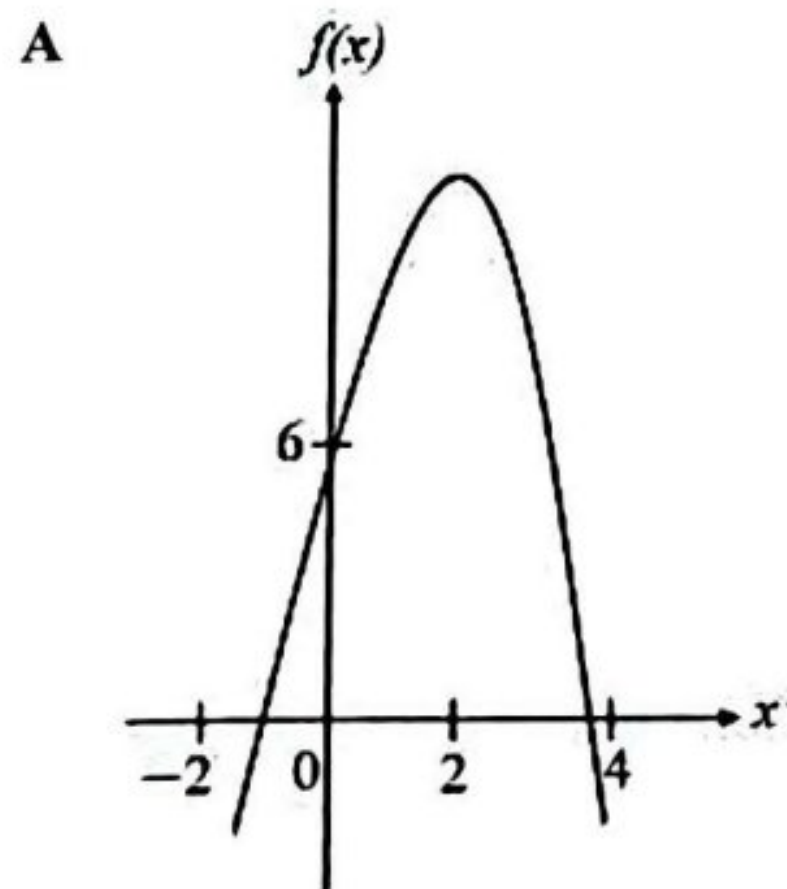
Diagram 6 shows a quadratic function $f(x) = -2x^2 + 3x + 6$.



Rajah 6 / Diagram 6

Pilih graf fungsi kuadratik yang betul apabila nilai " a " berubah kepada -6 .

Choose the correct quadratic graph function when the value of " a " change to -6 .



- 15 Diberi urutan nombor 1, 5, 9, 13, ...

Given the sequence of numbers, 1, 5, 9, 13, ...

$$1 = 4 \times 1 - 3$$

$$5 = 4 \times 2 - 3$$

$$9 = 4 \times 3 - 3$$

$$13 = 4 \times 4 - 3$$

.....

Cari sebutan ke-9 bagi urutan itu.

Find the 9-th term of the sequence.

A 30

B 33

C 36

D 39

- 16 Diberi

Given

$\xi = \{x : 10 < x < 70, x \text{ ialah integer}\},$

$\xi = \{x : 10 < x < 70, x \text{ is an integer}\},$

set $K = \{x : x \text{ ialah gandaan } 4\}$ dan

set $K = \{x : x \text{ is a multiple of } 4\}$ and

set $L = \{x : x \text{ ialah kuasa dua sempurna}\}.$

set $L = \{x : x \text{ is a perfect square}\}.$

Cari $n(K \cap L).$

Find $n(K \cap L).$

A 2

B 3

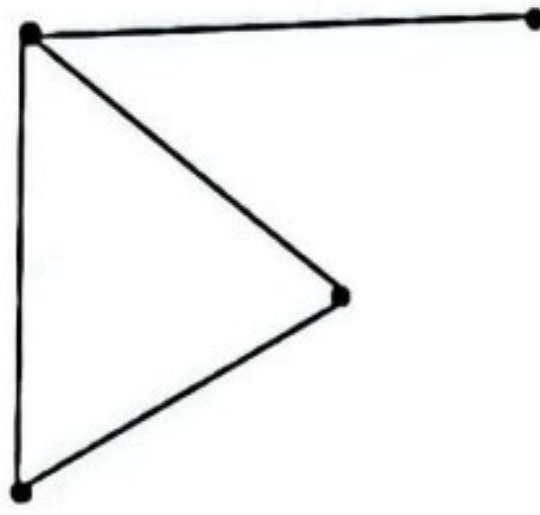
C 4

D 5

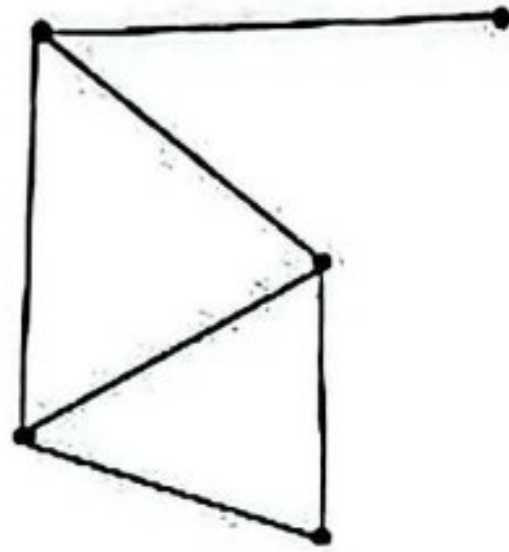
17 Antara berikut, manakah merupakan pokok?

Which of the following is a tree?

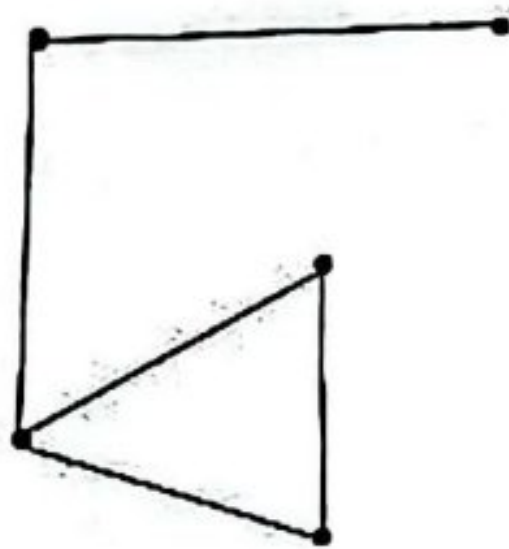
A



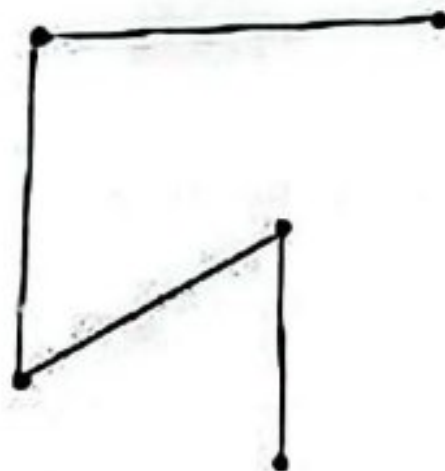
B



C



D



18 Diberi $4322_5 + 214_5 = 12034_5 - R_8$. Cari nilai R .

Given $4322_5 + 214_5 = 12034_5 - R_8$. Find the value of R .

A 137

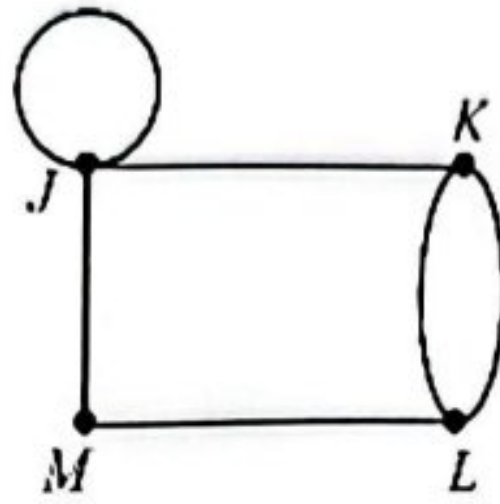
B 370

C 20462

D 22130

- 19 Rajah 7 menunjukkan sebuah graf dengan satu gelung dan berbilang tepi.

Diagram 7 shows a graph with a loop and multiple edges.



Rajah 7 / Diagram 7

Nyatakan bilangan darjah.

State the sum of degrees.

- A 6
B 11
C 12
D 14
- 20 Semua integer x yang memuaskan ketaksamaan $2x + 5 < 15 \leq 3x + 9$ ialah
All the integers x that satisfy the inequality $2x + 5 < 15 \leq 3x + 9$ are
- A 2, 3
B 3, 4
C 2, 3, 4
D 3, 4, 5

- 21 Rajah 8 menunjukkan beberapa kad bernombor secara rawak disusun di atas meja.

Diagram 8 shows several randomly numbered cards arranged on a table.



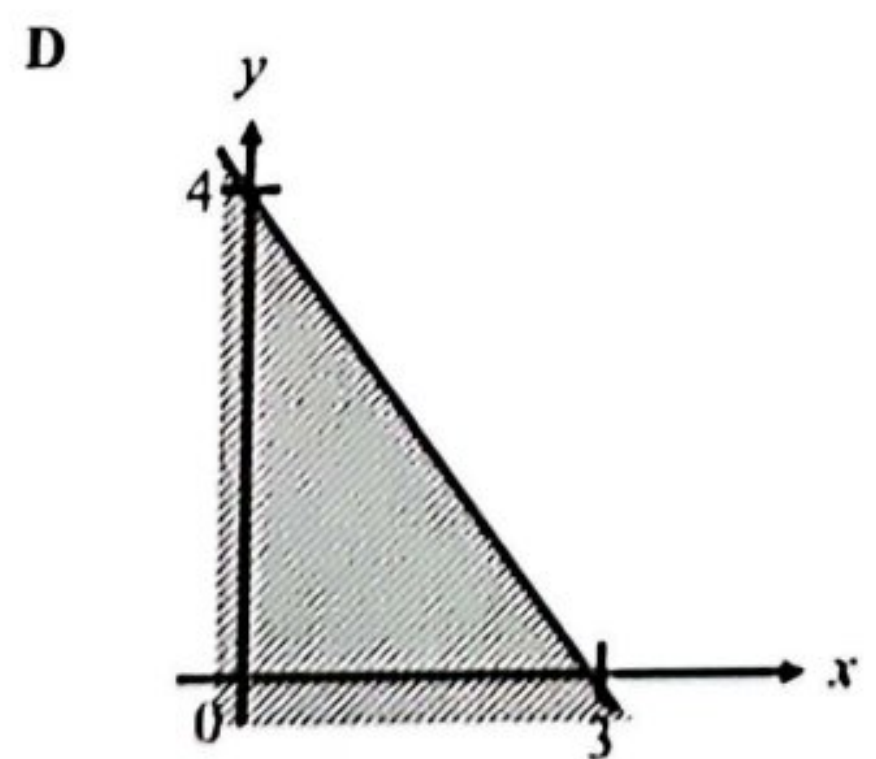
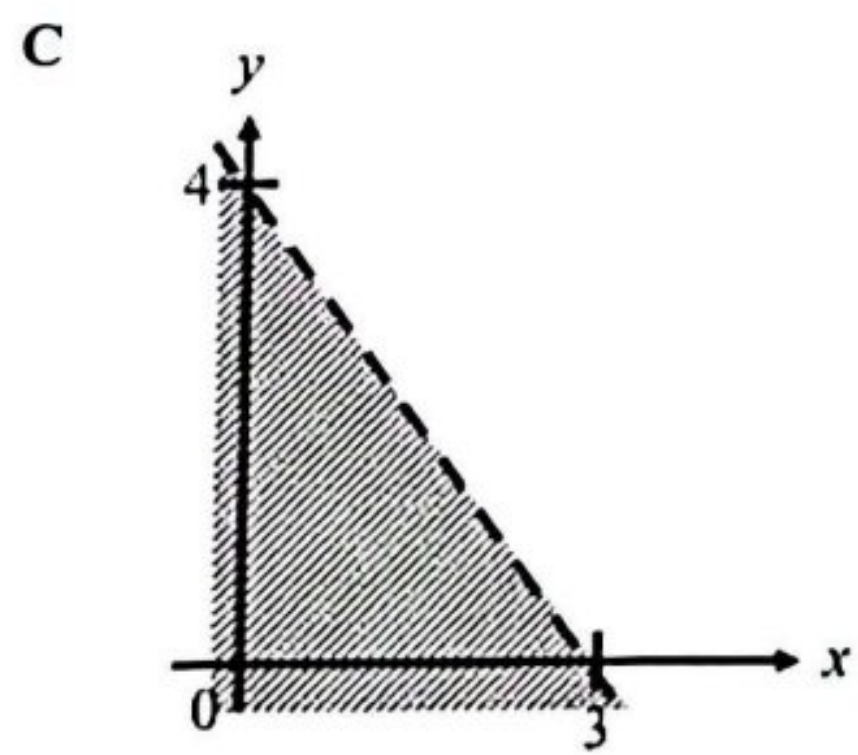
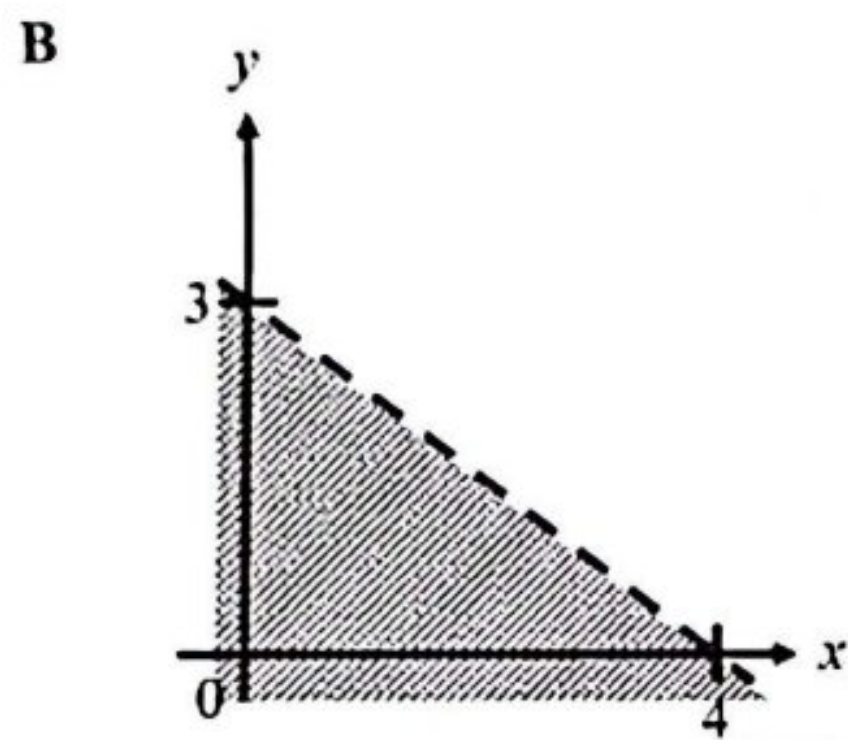
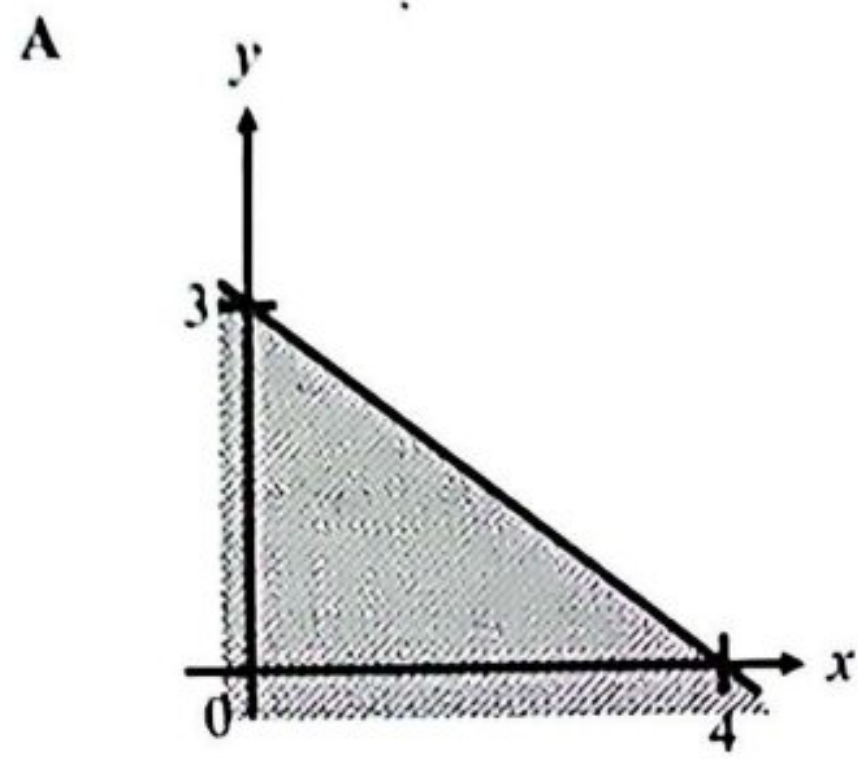
Rajah 8 / Diagram 8

Tentukan kuartil pertama.

Determine the first quartile.

- A 21
B 25
C 23
D 35

- 22 Antara graf berikut, yang manakah mewakili $4x + 3y \leq 12$?
Which of the following graphs represents $4x + 3y \leq 12$?



Jawab soalan 23 dan 24 berdasarkan Rajah 9.

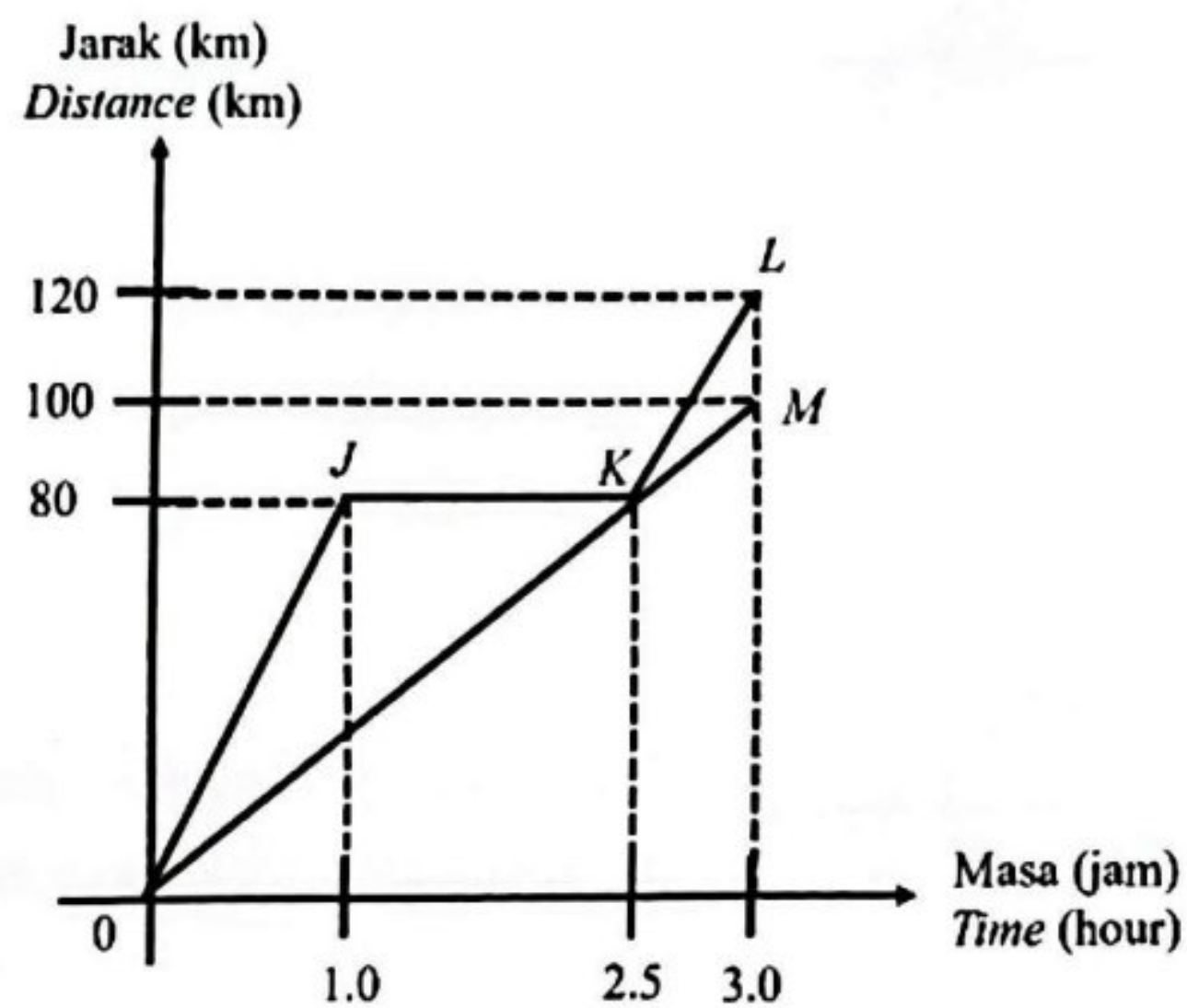
Answer question 23 and 24 based on Diagram 9.

Rajah 9 menunjukkan graf jarak-masa bagi sebuah kereta dan sebuah bas.

Diberi bahawa $OJKL$ mewakili perjalanan kereta dan OKM mewakili perjalanan bas.

Diagram 9 shows a distance-time graph showing the journey of a car and a bus.

Given that $OJKL$ represents the journey of the car and OKM represent the journey of the bus.



Rajah 9 / Diagram 9

- 23 Hitung laju purata, dalam km/j, bagi kereta sepanjang perjalanan itu.

Calculate the average speed, in km/h, of the car throughout the whole journey.

- A 20
- B 40
- C 60
- D 120

- 24 Tentukan masa yang diambil dalam perjalanan bas apabila ia bertemu dengan kereta itu.

Determine the time taken on the journey for the bus when it meets the car.

- A 1.0 jam / hours
- B 1.5 jam / hours
- C 2.5 jam / hours
- D 3.0 jam / hours

- 25 Plot batang-dan-daun dalam Rajah 10 menunjukkan tinggi beberapa orang murid kelas 5 Zahab.
The stem-and-leaf plot in Diagram 10 shows the height of a few students in class 5 Zahab.

Batang Stem	Daun Leaf				
14	3	3	3	8	
15	0	0	5	7	9
16	3	4	6		
17	1	1	4	7	8
18	0				

Kekunci : 14 | 8 bermaksud 148 cm
 Key : 14 | 8 means 148 cm

Rajah 10 / Diagram 10

Tentukan julat bagi data tersebut.

Determine the range of that data.

- A 18
 B 37
 C 143
 D 180
- 26 Dalam sebuah beg terdapat 5 biji bola merah, 3 biji bola putih dan beberapa biji bola hijau. Sebiji bola dipilih secara rawak daripada beg itu. Kebarangkalian memilih sebiji bola putih ialah $\frac{1}{5}$.
 Hitung kebarangkalian memilih sebiji bola hijau.

In a bag there are 5 red balls, 3 white balls and several green balls. A ball is chosen at random from the bag. The probability of choosing a white ball is $\frac{1}{5}$.

Calculate the probability of choosing a green ball.

- A $\frac{2}{15}$
 B $\frac{3}{8}$
 C $\frac{5}{8}$
 D $\frac{7}{15}$

- 27 Jadual 2 menunjukkan pendapatan bulanan Jason.

Table 2 shows Jason's monthly income.

Gaji <i>Salary</i>	RM3 000
Elaun <i>Allowance</i>	RM350
Sewa diterima <i>Rental received</i>	RM450
Dividen <i>Dividend</i>	RM250

Jadual 2 / Table 2

Hitung pendapatan aktif Jason.

Calculate active income of Jason.

- A RM3 000
B RM3 250
C RM3 350
D RM3 600
- 28 Diberi $M \propto N$ dan $M = 14$ apabila $N = 4$. Cari nilai M apabila $N = 6$.
Given $M \propto N$ and $M = 14$ when $N = 4$. Find the value of M when $N = 6$.
- A 12
B 21
C 24
D 42
- 29 $\begin{pmatrix} 3 & -4 \\ 2 & 5 \end{pmatrix} + \begin{pmatrix} -1 & 6 \\ 3 & 2 \end{pmatrix} - 2 \begin{pmatrix} 2 & 3 \\ 1 & 2 \end{pmatrix} =$
- A $\begin{pmatrix} -6 & -4 \\ 3 & 3 \end{pmatrix}$
B $\begin{pmatrix} -2 & -4 \\ 3 & 3 \end{pmatrix}$
C $\begin{pmatrix} -2 & -8 \\ 7 & 11 \end{pmatrix}$
D $\begin{pmatrix} 6 & 8 \\ 7 & 11 \end{pmatrix}$

- 30 Jadual 3 menunjukkan sebahagian daripada nilai-nilai bagi pembolehubah P , Q dan R yang memuaskan hubungan $P \propto \frac{Q}{\sqrt{R}}$.

Table 3 shows some of the values for the variables P , Q and R that satisfy the relationship $P \propto \frac{Q}{\sqrt{R}}$.

P	8	4
Q	10	12
R	25	n

Jadual 3 / Table 3

Hitung nilai n .

Calculate the value of n .

- A 16
B 81
C 100
D 144
- 31 Manakah dua matriks yang berikut boleh didarab.
Which of the following two matrices that can be multiplied.
- A $\begin{pmatrix} 2 \\ -1 \end{pmatrix} \begin{pmatrix} -1 & 2 \end{pmatrix}$
B $\begin{pmatrix} 1 \\ -2 \end{pmatrix} \begin{pmatrix} -2 \\ 1 \end{pmatrix}$
C $\begin{pmatrix} 3 \\ 5 \end{pmatrix} \begin{pmatrix} 1 & -2 \\ -3 & 4 \end{pmatrix}$
D $\begin{pmatrix} 1 & -2 \\ -3 & 4 \end{pmatrix} \begin{pmatrix} -2 & 4 \end{pmatrix}$
- 32 Pihak yang bertanggungjawab mengutip cukai jualan dan perkhidmatan ialah
The entities responsible for collecting sales and service tax are
- A Lembaga Hasil Dalam Negeri
Inland Revenue Board
B Jabatan Kastam Diraja Malaysia
Royal Malaysian Customs Department
C Majlis perbandaran
Municipal council
D Pejabat Tanah dan Galian
State Land Office

- 33 Jadual 4 menunjukkan sebahagian daripada kadar premium bagi polisi motor yang dikeluarkan di Semenanjung Malaysia, Sabah dan Sarawak.

Table 4 shows a part of premium rate for the motor policy that is used in Peninsular Malaysia, Sabah and Sarawak.

Kapasiti enjin tidak melebihi <i>Engine capacity not exceeding (cc)</i>	Semenanjung Malaysia <i>Peninsular Malaysia</i>		Sabah dan Sarawak <i>Sabah and Sarawak</i>	
	Polisi komprehensif <i>Comprehensive Policy (RM)</i>	Polisi pihak ketiga <i>Third Party Policy (RM)</i>	Polisi komprehensif <i>Comprehensive Policy (RM)</i>	Polisi pihak ketiga <i>Third Party Policy (RM)</i>
2 200	339.10	151.20	243.90	85.20
3 050	372.60	167.40	266.50	93.60

Jadual 4 / Table 4

Rosman tinggal di Bintulu, Sarawak dan ingin membeli polisi insurans pihak ketiga bagi keretanya yang berkapasiti 2 550 cc. Diberi Nilai Tanpa Tuntutan (NCD) beliau ialah 25%. Hitung premium kasar yang perlu dibayar oleh Rosman.

Rosman lives in Bintulu, Sarawak and would like to purchase a third party insurance policy for his car with capacity of 2 550 cc. Given that his No Claim Discount (NCD) value is 25%. Calculate the gross premium that Rosman has to pay.

- A RM21.30
- B RM23.40
- C RM63.90
- D RM70.20

- 34 Lim membayar cukai jalan sebanyak RM272 untuk keretanya. Kadar asas bagi 1 600 cc yang pertama ialah RM200 dan kadar progresif ialah RM0.40 per cc. Hitung kapasiti enjin keretanya.

Lim pays a road tax of RM272 for his car. The base rate for the first 1 600 cc is RM200 and the progressive rate is RM0.40 per cc. Calculate the engine capacity of his car.

- A 1 080 cc
- B 1 180 cc
- C 1 680 cc
- D 1 780 cc

- 35 Jadual 5 menunjukkan kerugian bagi tiga kemalangan yang dialami oleh Susie dalam tempoh insurans.

Table 5 shows the losses for the three accidents suffered by Susie during the insurance period.

Bulan <i>Month</i>	Kerugian <i>Loss (RM)</i>
Mei <i>May</i>	180
Ogos <i>August</i>	550
Oktober <i>October</i>	p

Jadual 5 / Table 5

Susie telah membeli insurans motor untuk keretanya yang mempunyai peruntukan deduktibel sebanyak RM200. Jumlah bayaran pampasan yang dituntut oleh Susie bagi tiga kemalangan ialah RM500. Cari nilai p .

Susie has purchased motor insurance for her car which has a deductible provision of RM200. The total compensation demanded by Susie for the three accidents was RM500. Find the value of p .

- A 150
- B 250
- C 350
- D 450

- 36 Diberi bahawa luas imej dan objek di bawah suatu pembesaran masing-masing ialah 180 cm^2 dan 5 cm^2 . Tentukan faktor skala bagi pembesaran itu.

Given that the areas of image and object under an enlargement are 180 cm^2 and 5 cm^2 respectively. Determine the scale factor of the enlargement.

- A $\frac{1}{36}$
- B $\frac{1}{6}$
- C 6
- D 36

- 37 Diberi $\tan x = -\frac{4}{3}$ dengan $270^\circ < x < 360^\circ$. Cari nilai $\cos x$.

Given $\tan x = -\frac{4}{3}$ where $270^\circ < x < 360^\circ$. Find the value of $\cos x$.

- A $-\frac{3}{5}$
 B $\frac{3}{5}$
 C $-\frac{5}{3}$
 D $\frac{5}{3}$

- 38 Jadual 6 menunjukkan jadual kekerapan mata yang diperoleh sekumpulan peserta dalam suatu kuiz Matematik.

Table 6 shows the frequency table of the points obtained by a group of participants in a Mathematics quiz.

Mata Point	Kekerapan Frequency	Kekerapan longgokan Cumulative frequency
20–24	4	4
25–29	8	12
30–34	11	S
35–39	9	32
40–44	R	38

Jadual 6 / Table 6

Hitung $R+S$.

Calculate $R+S$.

- A 35
 B 33
 C 31
 D 29

- 39 Bagi suatu taburan data terkumpul, median ialah 74 dan beza antara median dan kuartil pertama ialah 5. Hitung julat antara kuartil.

For a cumulative data distribution, the median is 74 and the difference between the median and the first quartile is 5. Calculate the interquartile range.

- A 10
- B 25
- C 69
- D 79

- 40 Antara berikut, yang manakah bukan pemboleh ubah dalam suatu model matematik?

Which of the following is not a variable in a mathematical model?

- A Suhu air
Water temperature
- B Laju kereta
Car speed
- C Perisa roti
Bread flavor
- D Harga beras
Rice price

KERTAS PEPERIKSAAN TAMAT
END OF QUESTION PAPER