

SULIT



NAMA: TINGKATAN:

**MODUL PINTAS
MATEMATIK TINGKATAN 5
TAHUN 2025**

Kertas 1

1449/1

Ogos

$1\frac{1}{2}$ jam

Satu jam tiga puluh minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

Arahan: Kertas soalan ini mengandungi **40** soalan. Jawab **semua** soalan. Setiap jawapan diikuti dengan empat pilihan jawapan, **A, B, C** dan **D**. Bagi setiap soalan, pilih satu jawapan sahaja. Penggunaan kalkulator yang tidak boleh diprogramkan adalah dibenarkan.

Instructions: This question paper consists of **40** questions. Answer **all** questions. Each question is followed by four choices of answers, **A, B, C** and **D**. For each question, choose one answer only. The use of non-programmable calculators is allowed.

Kertas soalan ini mengandungi 31 halaman bercetak.

RUMUS MATEMATIK MATHEMATICAL FORMULAE

Rumus-rumus berikut boleh membantu anda menjawab soalan. Simbol-simbol yang diberi adalah yang biasa digunakan.

The following formulae may be helpful in answering the questions. The symbols given are the ones commonly used.

NOMBOR DAN OPERASI NUMBERS 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 Facdah mudah / *Simple interest*, $I = Prt$

6 Facdah kompaun / *Compound interest*, $MV = P\left(1 + \frac{r}{n}\right)^{nt}$

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

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 Laju purata = $\frac{\text{Jumlah jarak}}{\text{Jumlah masa}}$

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

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

5 $m = -\frac{\text{pintasan-y}}{\text{pintasan-x}}$

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

6 $A^{-1} = \frac{1}{ad - bc} \begin{pmatrix} d & -b \\ -c & a \end{pmatrix}$

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 Panjang lengkok $= \frac{\theta}{360^\circ} \times 2\pi r$
Arc length $= \frac{\theta}{360^\circ} \times 2\pi r$
- 6 Luas sektor $= \frac{\theta}{360^\circ} \times \pi r^2$
Area of sector $= \frac{\theta}{360^\circ} \times \pi r^2$
- 7 Luas layang-layang $= \frac{1}{2} \times$ hasil darab panjang dua pepenjuru
Area of kite $= \frac{1}{2} \times$ product of two diagonals
- 8 Luas trapezium $= \frac{1}{2} \times$ hasil tambah dua sisi selari $\times$ tinggi
Area of trapezium $= \frac{1}{2} \times$ sum of two parallel sides $\times$ 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 $=$ luas keratan rentas $\times$ tinggi
Volume of prism $=$ area of cross section $\times$ 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 $= \frac{1}{3} \times \text{luas tapak} \times \text{tinggi}$

Volume of 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, $\bar{x} = \frac{\sum x}{N}$

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

Jawab semua soal.
Answer all questions.

- 1 Hitung
Calculate

$$\frac{5+(-1)-(-8)}{7-10}$$

- A -4
B -1
C 3
D 8

- 2 Ali mengisi minyak motosikalnya sebanyak $\frac{3}{4}$ liter pada waktu pagi. Pada waktu petang, dia menggunakan $\frac{5}{6}$ liter minyak untuk menghantar barang. Kemudian, dia mengisi semula $\frac{1}{2}$ liter minyak ke dalam tangki.

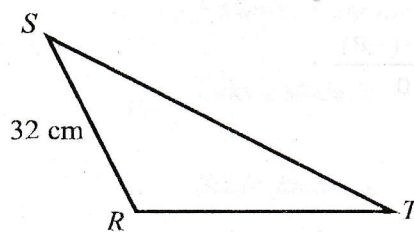
Hitung jumlah minyak terkini dalam tangki motosikal Ali.

Ali filled up his motorcycle with $\frac{3}{4}$ litres of fuel in the morning. In the evening, he used $\frac{5}{6}$ litres of fuel to deliver goods. Later, he refilled the tank with another $\frac{1}{2}$ litres of fuel.

Calculate the latest amount of fuel in the tank of Ali's motorcycle.

- A $\frac{13}{12}$
B $\frac{10}{12}$
C $\frac{7}{12}$
D $\frac{5}{12}$

- 3 Rajah 1 menunjukkan sebuah segi tiga RST .
Diagram 1 shows a triangle RST .



Rajah 1
Diagram 1

Diberi nisbah $RT : ST : RS = 1 : 2 : \frac{1}{2}$. Hitung perimeter, dalam cm, segi tiga RST .

Given the ratio of $RT : ST : RS = 1 : 2 : \frac{1}{2}$. Calculate the perimeter, in cm, of triangle RST .

- A 104
B 112
C 224
D 256
- 4 Tentukan Gandaan Sepunya Terkecil (GSTK) bagi 8 dan 12.
Determine the Lowest Common Multiple (L.CM) of 8 and 12.

- A. 12
B. 24
C. 36
D. 48

- 5 Terdapat 15 batang keluli berbentuk silinder dengan setiap keluli itu mempunyai diameter 14 cm dan panjangnya 1 m telah dileburkan untuk membentuk 70 biji bebola keluli yang sama saiz.
Hitungkan isipadu, dalam cm^3 , bagi sebiji bebola keluli itu.

*There are 15 cylindrical steel rods, each 14 cm in diameter and 1 m long, which have been melted to form 70 steel balls of the same size.
Calculate the volume, in cm^3 , of each steel ball.*

[Guna / Use $\pi = \frac{22}{7}$]

- A 1.32×10^4
B 3.3×10^3
C 1.32×10^2
D 3.3×10^1
- 6 Pendapatan aktif dan pendapatan pasif Encik Tajul masing-masing adalah sebanyak RM4 500 dan RM755. Anggaran jumlah perbelanjaannya adalah RM4 850.
Hitung pendapatan lebihan Encik Tajul dalam asas 6.

*Encik Tajul's active income and passive income are RM4 500 and RM755 respectively.
The estimated total expenditure is RM4 850.
Calculate Encik Tajul's surplus income in base 6.*

- A 1513_6
B 1512_6
C 1152_6
D 1151_6

- 7 Diberi $x_9 = 9^3 + (3 \times 9^2) + (2 \times 9^0)$.
Cari nilai x .

Given $x_9 = 9^3 + (3 \times 9^2) + (2 \times 9^0)$.

Find the value of x .

- A 123
- B 132
- C 1032
- D 1302

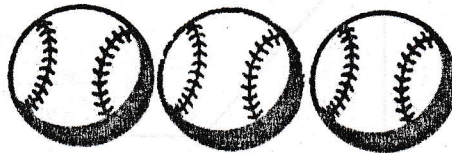
- 8 Antara berikut, yang manakah **bukan** faktor sepunya bagi sebutan $4k$ dan $6kh$?

Which of the following is **not** a common factor for the terms of $4k$ and $6kh$?

- A 1
- B 2
- C $2k$
- D $4k$

- 9 Rajah 2 menunjukkan 3 biji bola yang sama saiz. Jumlah luas permukaan bagi 3 biji bola tersebut ialah 1039.5 cm^2 .

Diagram 2 shows 3 balls of the same size. The total surface area of the 3 balls is 1039.5 cm^2 .



Rajah 2
Diagram 2

Hitung jejari, dalam cm, bagi sebiji bola tersebut.

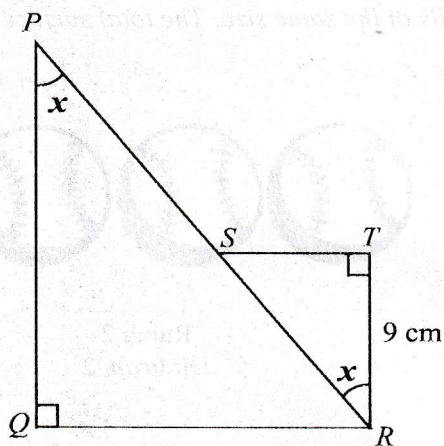
Calculate the radius, in cm, of a ball.

[Guna / Use $\pi = \frac{22}{7}$]

- A 5.25
- B 9.09
- C 27.56
- D 82.69

- 10 Rajah 3 menunjukkan segi tiga bersudut tegak PQR dan SRT . PSR ialah suatu garis lurus.

Diagram 3 shows a right-angled triangles PQR and SRT . PSR is a straight line.



Rajah 3
Diagram 3

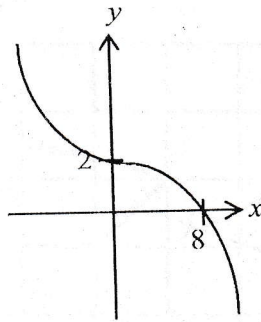
Diberi bahawa $\cos x = \frac{3}{4}$ dan nisbah panjang SR kepada PQ ialah $1 : 2$. Hitung panjang PS .

Given that $\cos x = \frac{3}{4}$ and the ratio of the length of SR to PQ is $1 : 2$. Calculate the length of PS .

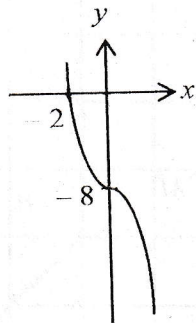
- A 12
- B 20
- C 28
- D 32

- 11 Graf yang manakah mewakili $y = -x^3 + 8$?
Which of the graph represents $y = -x^3 + 8$?

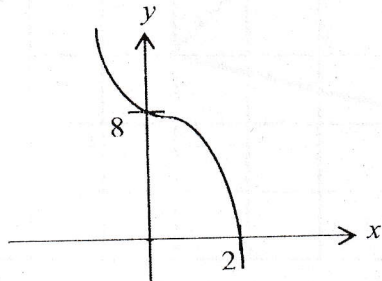
A



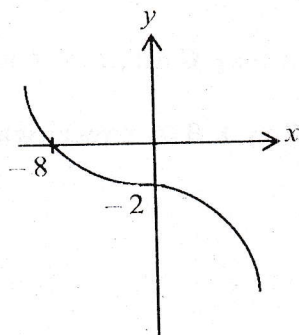
B



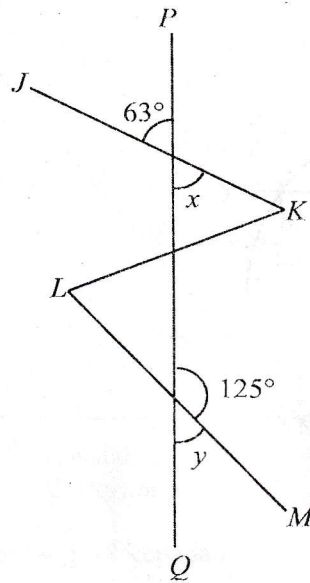
C



D



- 12 Rajah 4 menunjukkan garis lurus PQ , JK , KL dan LM .
Diagram 4 shows straight lines PQ , JK , KL and LM .



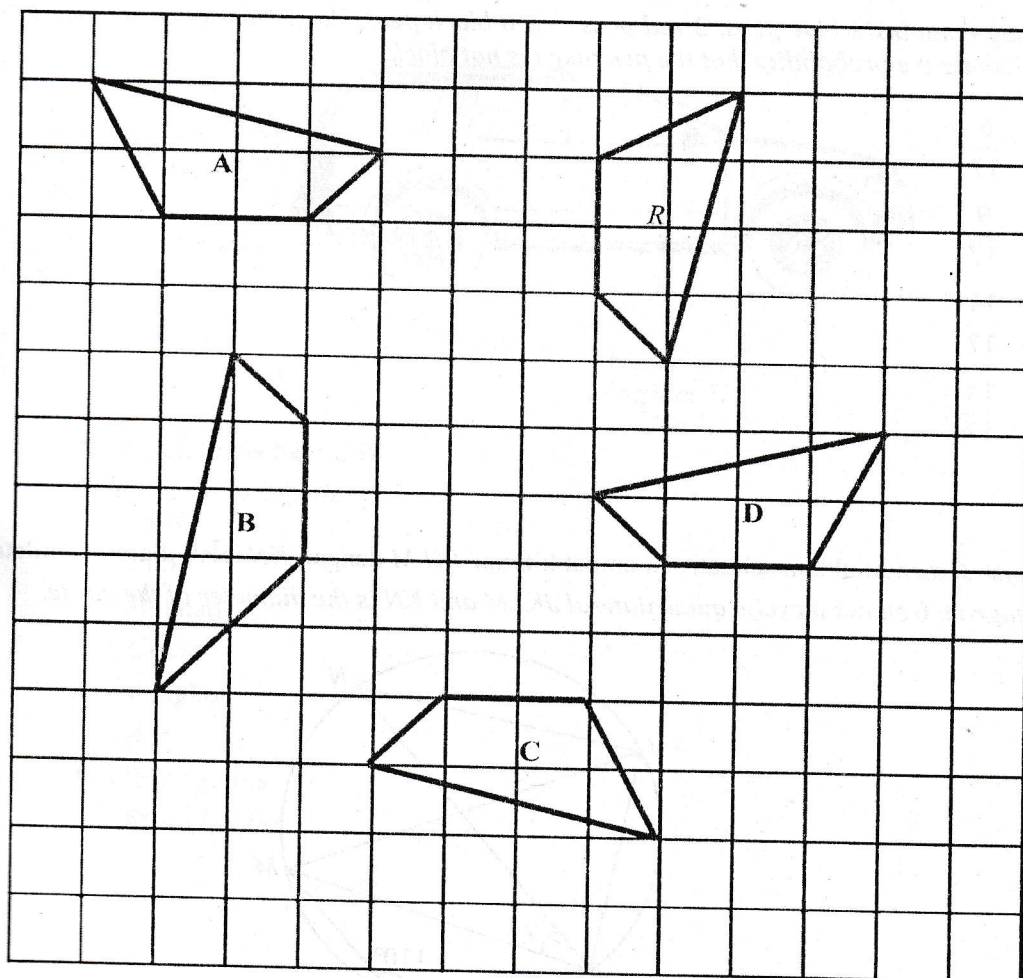
Rajah 4
Diagram 4

Cari nilai $x + y$.

Find the value of $x + y$.

- A 117°
- B 118°
- C 172°
- D 188°

- 13 Rajah 5 menunjukkan lima sisi empat yang dilukis pada grid segi empat sama.
Diagram 5 shows five quadrilaterals drawn on square grids.



Rajah 5
 Diagram 5

Antara sisi empat A, B, C dan D, yang manakah **bukan** imej yang kongruen dengan sisi empat R?

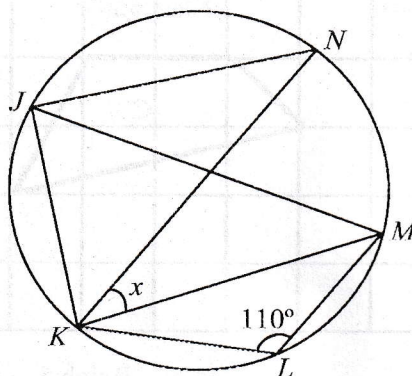
*Which of the quadrilaterals A, B, C or D is **not** congruent to quadrilateral R?*

- 14 Sebuah beg mengandungi 8 batang pen biru, 3 batang pen merah dan 6 batang pen hitam. Zarief mengeluarkan sebatang pen secara rawak. Hitung kebarangkalian pen yang dikeluarkan tidak berwarna hitam.

A bag contains 8 blue pens, 3 red pens and 6 black pens. Zarief takes out one pen at random. Calculate the probability that the pen taken is not black.

- A $\frac{6}{17}$
B $\frac{9}{17}$
C $\frac{11}{17}$
D $\frac{14}{17}$

- 15 Rajah 6 menunjukkan sebuah sisi empat kitaran $JKLM$ dengan KN ialah diameter bulatan. *Diagram 6 shows a cyclic quadrilateral $JKLM$ and KN is the diameter of the circle.*



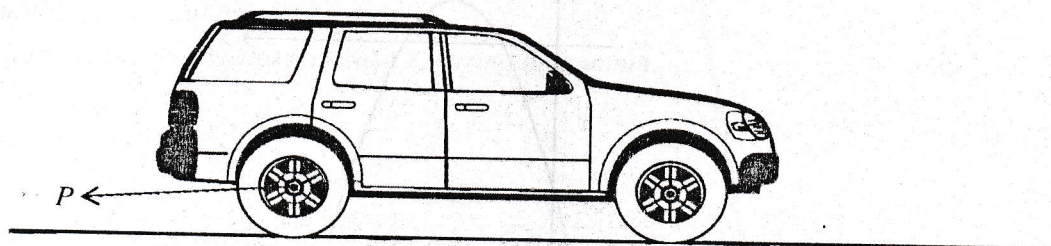
Rajah 6
Diagram 6

Cari nilai x .
Find the value of x .

- A 10°
B 20°
C 35°
D 45°

- 16 Rajah 7 menunjukkan sebuah kereta yang sedang bergerak di atas jalan raya yang lurus dan rata. Titik P berada pada pusat tayar.

Diagram 7 shows a car is moving on a straight and flat road. Point P is at the centre of the wheel.



Rajah 7
Diagram 7

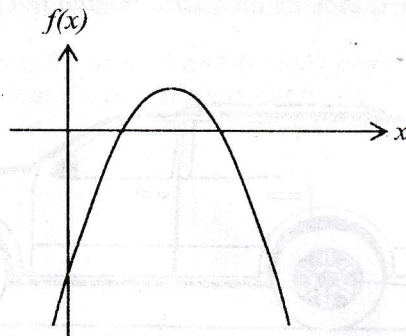
Nyatakan lokus bagi titik P .

State the locus of point P .

- A Titik
Point
- B Bulatan
Circle
- C Lengkuk
Arc
- D Garis Lurus
Straight Line

- 17 Rajah 8 menunjukkan suatu graf fungsi.

Diagram 8 shows a graph function.



Rajah 8
Diagram 8

Apakah persamaan yang mungkin bagi graf fungsi tersebut?

What is the possible equation for the graph function?

- A $f(x) = -x^2 + 4x - 3$
- B $f(x) = -x^2 + 4x + 3$
- C $f(x) = x^2 + 4x - 3$
- D $f(x) = x^2 + 4x + 3$
- 18 Umur Azura adalah 3 tahun lebih tua daripada adiknya, Aqif. Diberi umur Aqif ialah m tahun. Hasil darab umur mereka pada 5 tahun lepas ialah 70. Hitung umur Azura.
- Azura is 3 years older than her younger brother, Aqif. Given that Aqif is m years old. The product of their ages 5 years ago is 70. Calculate the age of Azura.
- A 7
- B 10
- C 12
- D 15



19. Jumlah kanak-kanak dan orang dewasa yang mengunjungi Petrosains pada bulan Februari ialah 4608. Diberi $\frac{1}{4}$ daripadanya ialah kanak-kanak.

Hitung bilangan pengunjung dewasa, dalam asas 2, pada bulan itu.

The total number of children and adults who are visited Petrosains in February is 4608.

Given that $\frac{1}{4}$ of them were children.

Calculate the number of adult visitors, in base 2, during that month.

- A 1001100₂
- B 1001101₂
- C 11100100₂
- D 11100111₂

20. Antara implikasi berikut, yang manakah dapat membentuk implikasi “ p jika dan hanya jika q ”?

- A P: Jika $k = m^{-1}$, maka $m = \frac{1}{k}$.
Q: Jika $m = \frac{1}{k}$, maka $k = m^{-1}$.

P: If $k = m^{-1}$, then $m = \frac{1}{k}$.

Q: If $m = \frac{1}{k}$, then $k = m^{-1}$.

- B P: Jika x ialah nombor genap, maka x^2 ialah nombor genap.
Q: Jika x^2 ialah nombor ganjil, maka x ialah nombor ganjil.

P: If x is an even number, then, x^2 is an even number.

Q: If x^2 is an odd number, then x is an odd number.

- C P: Jika $p^2 - q^2 > 0$, maka $(p + q)(p - q) > 0$.
Q: Jika $(p + q)(p - q) < 0$, maka $p^2 - q^2 < 0$.

P: If $p^2 - q^2 > 0$, then $(p + q)(p - q) > 0$.

Q: If $(p + q)(p - q) < 0$, then $p^2 - q^2 < 0$.

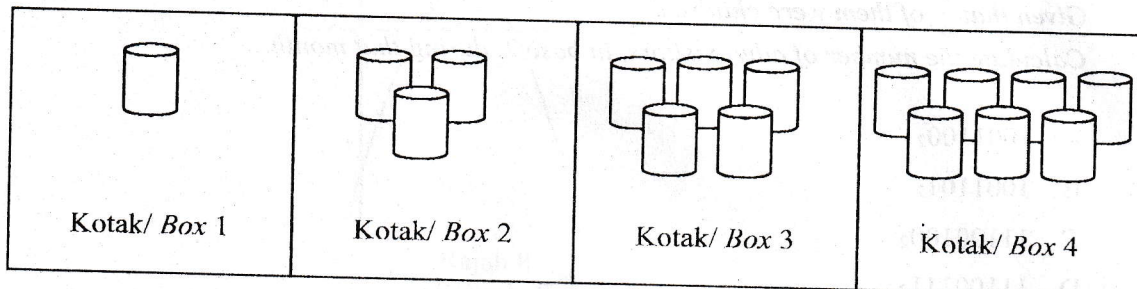
- D P: Jika XYZ ialah poligon sekata, maka $XY = YZ = XZ$.
Q: Jika $XY = YZ = XZ$, maka XYZ ialah segi tiga sama sisi.

P: If XYZ is a regular polygon, then $XY = YZ = XZ$.

Q: If $XY = YZ = XZ$, then XYZ is an equilateral triangle.

- 21 Rajah 9 menunjukkan susunan tin berbentuk silinder yang sama saiz dalam kotak mengikut pola nombor 1, 3, 5, 7, ...

Diagram 9 shows the arrangement of cylindrical cans of the same size in a box according to the pattern numbers 1, 3, 5, 7 ...



Rajah 9
Diagram 9

Diameter dan tinggi bagi setiap tin masing-masing ialah 7 cm dan 11 cm.
Hitung jumlah isi padu tin, dalam cm^3 , bagi kotak ke -7.

The diameter and height of each can are 7 cm and 11 cm respectively.
Calculate the total volume of the cans, in cm^3 , of the 7th box.

[Guna / Use $\pi = \frac{22}{7}$]

- A 3811.5
- B 4658.5
- C 5505.5
- D 6352.5

22 Antara berikut, yang mana merupakan hujah deduktif?

Which of the following is a deductive argument?

- A Sisi empat mempunyai 4 bucu.
Pentagon mempunyai 5 bucu.
Maka, semua poligon dengan n sisi mempunyai n bucu.

A quadrilateral has 4 vertices.

A pentagon has 5 vertices.

Thus, all polygons with n sides have n vertices.

- B Set A dengan 2 unsur mempunyai 4 subset.
Set B dengan 3 unsur mempunyai 8 subset.
Maka, semua set dengan n unsur mempunyai 2^n subset.

Set A with 2 elements has 4 subsets.

Set B with 3 elements has 8 subsets.

Thus, all sets with n elements have 2^n subsets.

- C Luas bulatan ialah πr^2 cm².
Luas bulatan M dengan jejari 7 cm ialah 49π cm².
The area of a circle is πr^2 cm².
The area of circle M with a radius of 7 cm is 49π cm².

- D Hasil tambah sudut peluaran segi tiga ialah 360° .
Maka, hasil tambah sudut peluaran setiap poligon ialah 360° .
The sum of the exterior angles of a triangle is 360° .
Therefore, the sum of the exterior angles of each polygon is 360° .

23 Diberi bahawa set semesta, $\xi = \{x: x \text{ ialah integer, } 30 \leq x \leq 40\}$, set $J = \{32, 34, 36, 38\}$ dan set $K = \{34, 35, 36, 37\}$.

Tentukan semua unsur bagi set $J \cap K$.

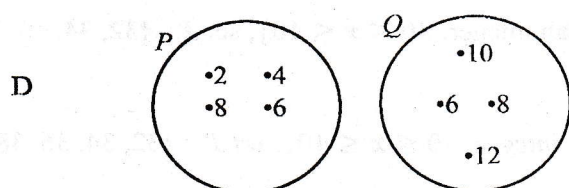
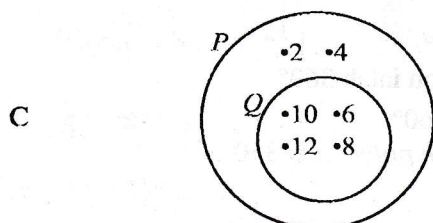
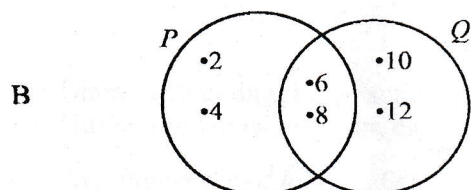
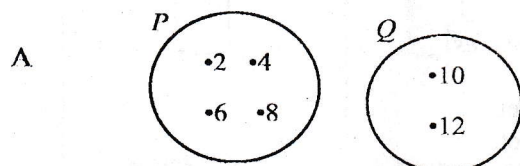
Given that the universal set, $\xi = \{x: x \text{ is integer, } 30 \leq x \leq 40\}$, set $J = \{32, 34, 36, 38\}$ and set $K = \{34, 35, 36, 37\}$.

Determine all the elements of set $J \cap K$.

- A $\{34, 36\}$
B $\{32, 34, 36\}$
C $\{30, 31, 33, 39, 40\}$
D $\{32, 34, 35, 36, 37, 38\}$

- 24 Diberi set $P = \{2, 4, 6, 8\}$ dan set $Q = \{6, 8, 10, 12\}$.
Antara gambar rajah Venn berikut, yang manakah mewakili set $P \cup Q$?

Given set $P = \{2, 4, 6, 8\}$ and set $Q = \{6, 8, 10, 12\}$.
Which of the following Venn diagrams represent set of $P \cup Q$?

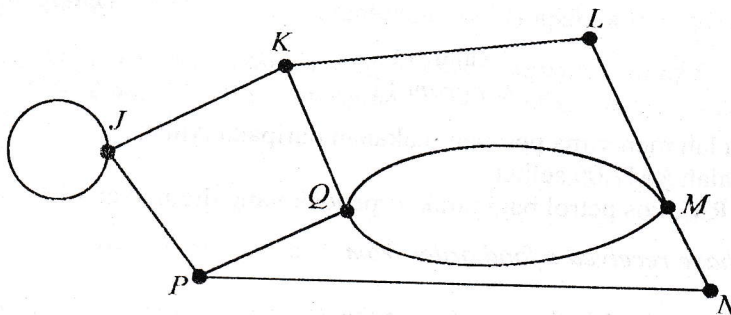


- 25 Pada hujung minggu, terdapat 30 orang melakukan aktiviti berbasikal, 20 orang berkayak dan 10 orang melakukan kedua-dua aktiviti di sebuah taman rekreasi. Hitung bilangan orang yang melakukan sekurang-kurangnya satu daripada dua aktiviti tersebut.

At the weekend, there are 30 persons doing cycling activities, 20 persons doing kayaking activities, and 10 persons doing both activities in a recreational park. Calculate the number of persons doing at least one of the two activities?

- A 40
- B 50
- C 60
- D 70

- 26 Rajah 10 menunjukkan graf gelung dan berbilang tepi.
Diagram 10 shows graph loop and multiple edges.



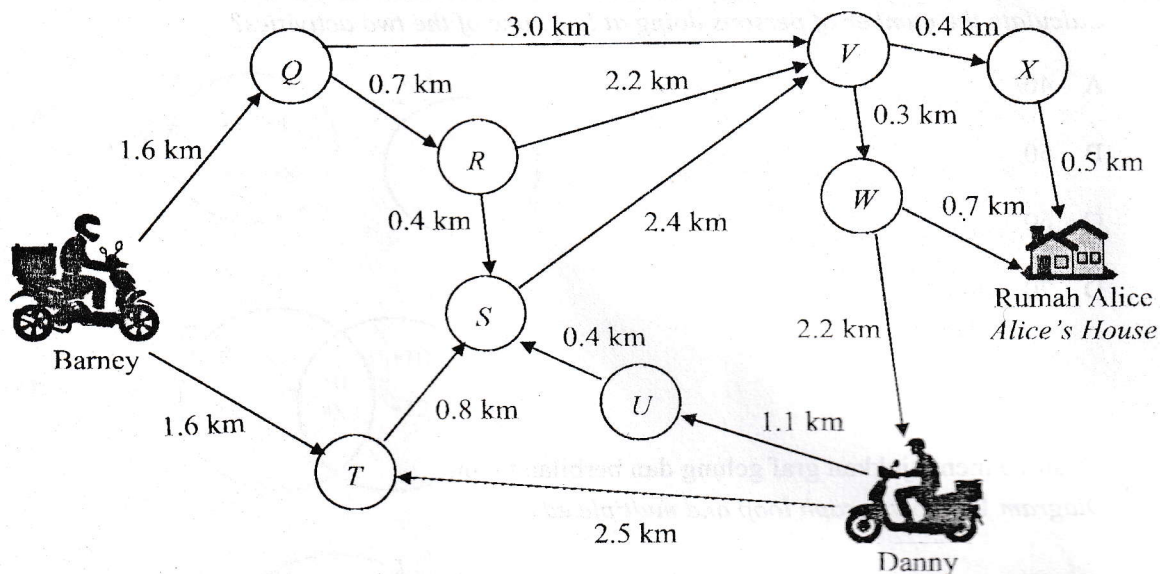
Rajah 10
Diagram 10

Tentukan bilangan darjah bagi graf itu.
Determine the number of degrees of the graph.

- A 22
- B 20
- C 11
- D 10

- 27 Rajah 11 menunjukkan satu graf terarah dan berpemberat untuk menghantar makanan ke rumah Alice.

Diagram 11 shows a directed weighted graph to deliver food to Alice's house.



Rajah 11
Diagram 11

Barney dan Danny telah menerima pesanan makanan daripada Alice.

Diberi kos petrol adalah RM2.05 seliter.

Hitung beza, dalam RM, kos petrol bagi jarak terpendek yang digunakan oleh mereka.

Barney and Danny have received a food order from Alice. Given the cost of petrols is RM2.05 per litre.

Calculate the difference, in RM, the petrol costs for the shortest distance used by them.

- A 1.85
- B 1.43
- C 1.23
- D 1.03

[Lihat halaman sebelah

- 28 Antara berikut, yang manakah **bukan** kunci komponen dalam konsep SMART semasa menetapkan matlamat?

*Which of the following is **not** a key component in the SMART concept for goal setting?*

- A Boleh diukur
Measurable
- B Tempoh masa
Time - bound
- C Khusus
Specific
- D Matlamat
Goal

- 29 Diberi bahawa F berubah secara langsung dengan kuasa tiga G dan punca kuasa dua H .
Jika $F = -8$ apabila $G = 2$ dan $H = 25$, tentukan nilai G apabila $F = 80$ dan $H = 16$.

*It is given that F varies directly as the cube of G and the square root of H .
If $F = -8$ when $G = 2$ and $H = 25$, determine the value of G when $F = 80$ and $H = 16$.*

- A 4.64
- B 4.46
- C -4.46
- D -4.64

- 30 p berubah secara langsung dengan punca kuasa tiga q dan secara songsang dengan r .
Hubungan antara p , q dan r ialah

p varies directly as the cube root of q and inversely as r .
The relation between p , q and r is

A $p \propto \frac{r^2}{\sqrt[3]{q}}$

B $p \propto \frac{q^3}{r}$

C $p \propto \frac{\sqrt[3]{q}}{r}$

D $p \propto \frac{\sqrt[3]{r}}{q}$

- 31 Diberi bahawa matriks $A = \begin{bmatrix} 3 & 1 & -2 \\ -4 & 2 & 6 \end{bmatrix}$. Tentukan peringkat bagi matriks A .

Given that matrix $A = \begin{bmatrix} 3 & 1 & -2 \\ -4 & 2 & 6 \end{bmatrix}$. Determine the order of matrix A .

A 1×3

B 2×3

C 3×1

D 3×2

- 32 Diberi bahawa matriks $P = \begin{bmatrix} 2h + 1 \\ 5h - 8k \end{bmatrix}$ dan matriks $Q = \begin{bmatrix} 15 \\ 31 \end{bmatrix}$.

Hitung nilai h dan k jika $P = Q$.

Given that matrix $P = \begin{bmatrix} 2h + 1 \\ 5h - 8k \end{bmatrix}$ and matrix $Q = \begin{bmatrix} 15 \\ 31 \end{bmatrix}$.

Calculate the value of h and k if $P = Q$.

A $h = 7, k = \frac{1}{2}$

B $h = 7, k = \frac{1}{4}$

C $h = 8, k = \frac{9}{8}$

D $h = 8, k = \frac{3}{8}$

33 $\begin{bmatrix} -11 & 9 \\ 10 & 4 \end{bmatrix} + \begin{bmatrix} 11 & 8 \\ -7 & -5 \end{bmatrix} =$

A $\begin{bmatrix} 0 & 16 \\ 3 & 9 \end{bmatrix}$

B $\begin{bmatrix} 0 & 17 \\ 17 & 9 \end{bmatrix}$

C $\begin{bmatrix} 0 & 17 \\ 3 & -1 \end{bmatrix}$

D $\begin{bmatrix} 22 & 17 \\ 3 & -1 \end{bmatrix}$

34 Jika $\begin{bmatrix} 2 & 1 \\ 4 & -6 \end{bmatrix} - M = \begin{bmatrix} 2 & 3 \\ -1 & 6 \end{bmatrix}$, maka matriks M ialah

If $\begin{bmatrix} 2 & 1 \\ 4 & -6 \end{bmatrix} - M = \begin{bmatrix} 2 & 3 \\ -1 & 6 \end{bmatrix}$, then matrix M is

A $\begin{bmatrix} 0 & -2 \\ 3 & -12 \end{bmatrix}$

B $\begin{bmatrix} 0 & 2 \\ -5 & 5 \end{bmatrix}$

C $\begin{bmatrix} 0 & -2 \\ 5 & -12 \end{bmatrix}$

D $\begin{bmatrix} 4 & 4 \\ 3 & 0 \end{bmatrix}$

- 35 Maryam bersarapan di sebuah restoran. Dia makan sepinggan mee goreng, dua ketul ayam goreng dan minum dua cawan teh. Harga sepinggan mee goreng ialah RM8.00, seketul ayam goreng ialah RM5.00, manakala secawan teh ialah RM4.00. Restoran tersebut mengenakan cukai perkhidmatan 6%.

Hitung cukai perkhidmatan yang perlu dibayar oleh Maryam.

Maryam had breakfast at a restaurant. She had eaten a plate of fried noodles, two pieces of fried chicken and drank two cups of tea. The price of a plate of fried noodles is RM8.00, a piece of fried chicken is RM5.00, while a cup of tea is RM4.00. The restaurant charges a service tax of 6%.

Calculate the service tax that Maryam has to pay.

A RM1.02

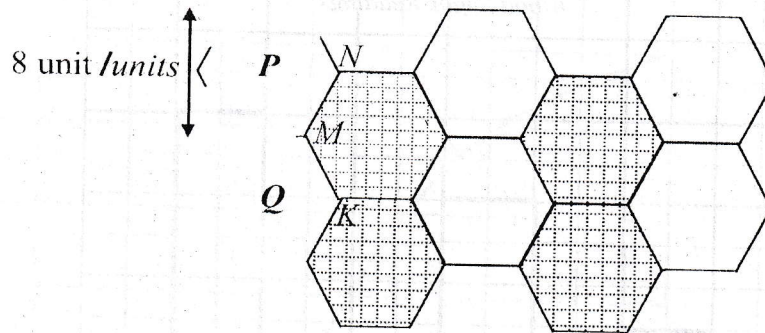
B RM1.56

C RM26.00

D RM 27.56

- 36 Rajah 12 menunjukkan corak jubin pilihan Devi untuk dinding dapurnya. Corak tersebut menunjukkan suatu bentuk teselasi daripada heksagon sekata yang dihasilkan dengan transformasi isometri.

Diagram 12 shows the tile pattern chosen by Devi for her kitchen wall. The pattern shows a tessellation of regular hexagons produced by isometric transformation.



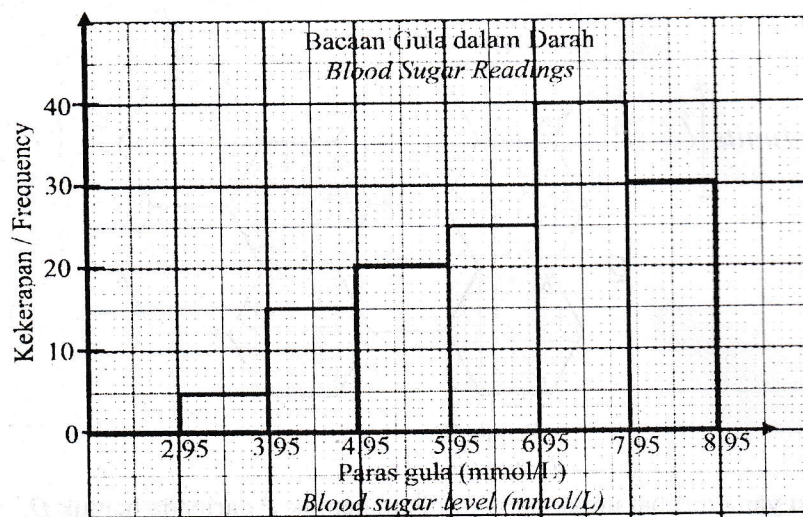
Rajah 12
Diagram 12

Nyatakan transformasi yang terlibat untuk menghasilkan bentuk *P* daripada bentuk *Q*.
State the transformation involved to produce shape P from shape Q.

- A Pantulan pada garis *MN*
Reflection on line MN
- B Pantulan pada garis *KM*
Reflection on line KM
- C Translasi $\begin{pmatrix} 8 \\ 0 \end{pmatrix}$
Translation $\begin{pmatrix} 8 \\ 0 \end{pmatrix}$
- D Translasi $\begin{pmatrix} 0 \\ 8 \end{pmatrix}$
Translation $\begin{pmatrix} 0 \\ 8 \end{pmatrix}$

- 37 Rajah 13 menunjukkan satu histogram bagi bacaan gula dalam darah yang diambil daripada sekumpulan pesakit di sebuah klinik.

Diagram 13 shows a histogram of blood sugar readings taken from a group of patients at a clinic.



Rajah 13
Diagram 13

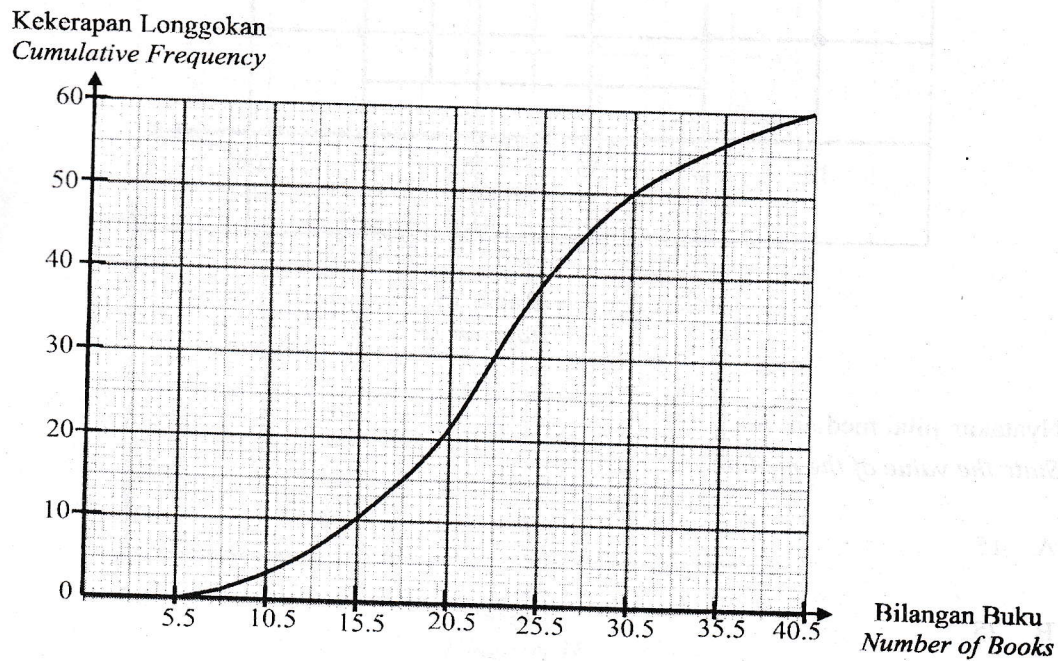
Nyatakan bentuk taburan histogram itu.

State the distribution shape of the histogram.

- A Bentuk loceng
Bell-shaped
- B Seragam
Uniform-shaped
- C Pencong ke kanan
Right-skewed
- D Pencong ke kiri
Left-skewed

- 38 Rajah 14 ialah satu ogif yang menunjukkan bilangan buku yang dibaca oleh sekumpulan murid dalam bulan Jun.

Diagram 14 is an ogive that shows the number of books read by a group of students in June.



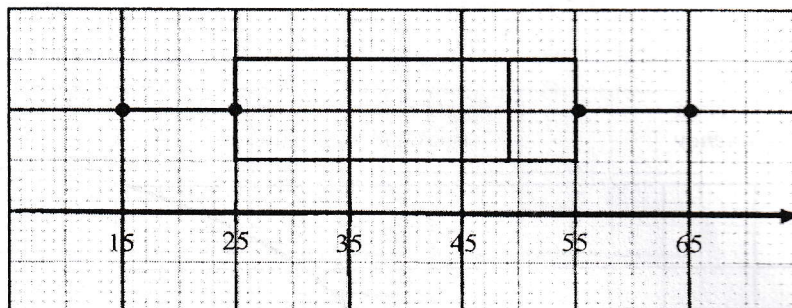
Rajah 14
Diagram 14

Hitung julat antara kuartil bagi ogif tersebut.
Calculate the interquartile range for the ogive.

- A 10
B 18
C 28
D 35

39 Rajah 15 menunjukkan sebuah plot kotak.

Diagram 15 shows a box plot.



Rajah 15
Diagram 15

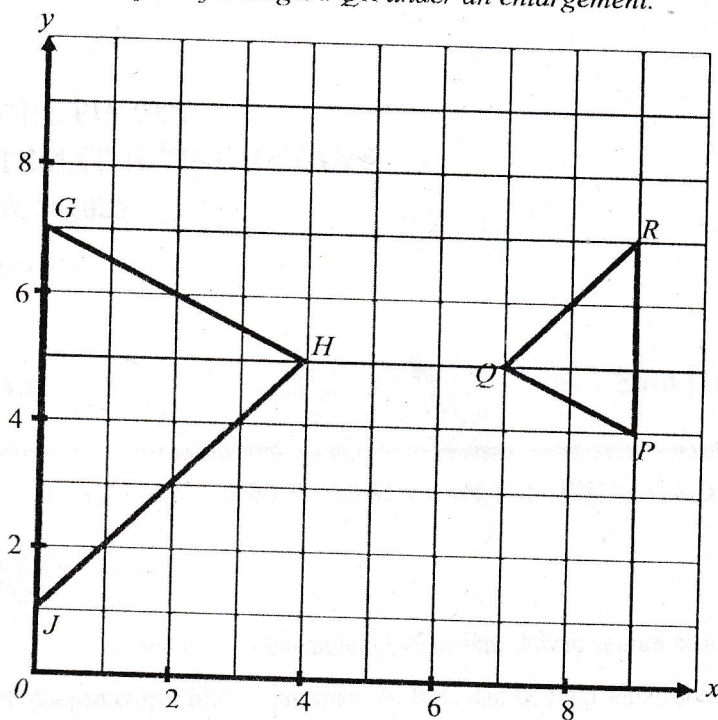
Nyatakan nilai median.

State the value of the median.

- A 15
- B 25
- C 49
- D 55

- 40 Rajah 16 menunjukkan dua segi tiga, GHI dan PQR , dilukis di atas satah Cartes. Segi tiga GHI ialah objek bagi segi tiga PQR di bawah suatu pembesaran.

Diagram 16 shows two triangles, GHI and PQR , drawn on a Cartesian plane. Triangle GHI is the object of triangle PQR under an enlargement.



Rajah 16
Diagram 16

Tentukan pusat pembesaran dan faktor skala bagi pembesaran itu.

Determine the centre and the scale factor of the enlargement.

	Pusat Pembesaran Centre of Enlargement	Faktor skala Scale factor
A	(6 , 5)	-2
B	(6 , 5)	$-\frac{1}{2}$
C	(5 , 6)	$\frac{1}{2}$
D	(5 , 6)	2

KERTAS PEPERIKSAAN TAMAT
END OF EXAMINATION PAPER