

SULIT



KEMENTERIAN PENDIDIKAN

**PENTAKSIRAN DIAGNOSTIK AKADEMIK
SEKOLAH BERASRAMA PENUH 2026**

PEPERIKSAAN PERCUBAAN SIJIL PELAJARAN MALAYSIA

MATEMATIK

1449/1

Kertas 1

Julai 2026

1 ½ jam

Satu jam tiga puluh minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

Arahan:

1. *Kertas soalan ini adalah dalam dwibahasa.*
2. *Soalan dalam Bahasa Melayu mendahului soalan yang sepadan dalam Bahasa Inggeris.*
3. *Calon dikehendaki membaca maklumat di halaman belakang kertas soalan ini.*



Kertas soalan ini mengandungi 33 halaman bercetak.

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 $= \frac{1}{2} \times \text{hasil darab panjang dua pepenjuru}$
Area of kite $= \frac{1}{2} \times \text{product of two diagonals}$
- 8 Luas trapezium $= \frac{1}{2} \times \text{hasil tambah dua sisi selari} \times \text{tinggi}$
Area of trapezium $= \frac{1}{2} \times \text{sum of two parallel sides} \times \text{height}$
- 9 Luas permukaan silinder $= 2\pi r^2 + 2\pi r h$
Surface area of cylinder $= 2\pi r^2 + 2\pi r h$
- 10 Luas permukaan kon $= \pi r^2 + \pi r s$
Surface area of cone $= \pi r^2 + \pi r s$
- 11 Luas permukaan sfera $= 4\pi r^2$
Surface area of sphere $= 4\pi r^2$
- 12 Isi padu prisma $= \text{luas keratan rentas} \times \text{tinggi}$
Volume of prism $= \text{area of cross section} \times \text{height}$
- 13 Isi padu silinder $= \pi r^2 h$
Volume of cylinder $= \pi r^2 h$

- 14 Isi padu kon $= \frac{1}{3} \pi r^2 h$
Volume of cone $= \frac{1}{3} \pi r^2 h$
- 15 Isi padu sfera $= \frac{4}{3} \pi r^3$
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, $\bar{x} = \frac{\sum fx}{\sum f}$
- 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 $P(A') = 1 - P(A)$



SERTAI TELEGRAM @exercise_students

- 1 Hitung nilai bagi $750.83 - 2.469 \times 10^2$ dan bundarkan jawapan betul kepada empat angka bererti.

Calculate the value of $750.83 - 2.469 \times 10^2$ and round off the answer correct to four significant figures.

- A 503.93
- B 503.90
- C 503.9
- D 504.0

- 2 $2.4 \times 10^8 + 3.7 \times 10^7 = 3.7 \times 10^8 \times 10^p + 2.4 \times 10^8$

Hitung nilai p .

Calculate the value of p .

- A -7
- B -1
- C 1
- D 7

- 3 Diberi bahawa $16^{2x} \div 256 = \frac{1}{4^8}$, hitung nilai x .

Given that $16^{2x} \div 256 = \frac{1}{4^8}$, calculate the value of x .

- A 3
- B 1
- C -1
- D -3

- 4 Diberi bahawa P berubah secara langsung dengan kuasa dua Q dan secara songsang dengan punca kuasa tiga R . Jika $P = 9$ apabila $Q = 6$ dan $R = 27$, ungkapkan P dalam sebutan Q dan R .

It is given that P varies directly as the square of Q and inversely as the cube root of R . If $P = 9$ when $Q = 6$ and $R = 27$, express P in terms of Q and R .

A $P = \frac{Q^2}{\sqrt[3]{R}}$

B $P = \frac{3Q^2}{4\sqrt[3]{R}}$

C $P = \frac{4Q^2}{3\sqrt[3]{R}}$

D $P = \frac{Q^2\sqrt[3]{R}}{12}$

- 5 Diberi $405_9 - x_9 = 233_9$, hitung nilai x .

Given $405_9 - x_9 = 233_9$, find the value of x .

A 162

B 172

C 232

D 638

- 6 Motosikal milik Hakim dilindungi oleh insurans motor yang mempunyai peruntukan deduktibel sebanyak RM250. Sepanjang tempoh insurans tersebut, Hakim telah mengalami empat kemalangan dengan jumlah kerugian masing-masing sebanyak RM180, RM350, RM1 250 dan RM210.

Berapakah jumlah pampasan keseluruhan yang boleh dituntut oleh Hakim daripada syarikat insurans bagi kerugian tersebut?

Hakim's motorcycle is covered with a motor insurance policy with a deductible provision of RM250. During the insurance coverage period, Hakim was involved in four accidents with loss suffered of RM180, RM350, RM1 250 and RM210 respectively.

What is the total amount of compensation that Hakim can claim from the insurance company for those losses?

- A RM1 990
- B RM1 740
- C RM1 600
- D RM1 100

- 7 Jika $s = t \left(\frac{\sqrt{u} + v}{3} \right)$, maka $u =$

If $s = t \left(\frac{\sqrt{u} + v}{3} \right)$, then $u =$

- A $\sqrt{\frac{st-v}{3}}$
- B $\sqrt{\frac{3s}{t} - v}$
- C $\left(\frac{3s}{t} - v \right)^2$
- D $\left(\frac{st-v}{3} \right)^2$

- 8 Faktorkan selengkapnya :
Factorise completely :

$$12x^2 - 3$$

- A $(2x-1)(2x+1)$
B $(2x-1)(2x-1)$
C $3(2x+1)(2x+1)$
D $3(2x-1)(2x+1)$
- 9 Dalam satu acara larian amal, peserta mesti menamatkan larian dalam masa lebih daripada 30 minit tetapi kurang daripada 50 minit. Dev menamatkan larian dalam masa 42 minit. Berapakah bilangan minit maksimum yang boleh ditambah kepada masa Dev supaya dia masih memenuhi syarat acara tersebut?

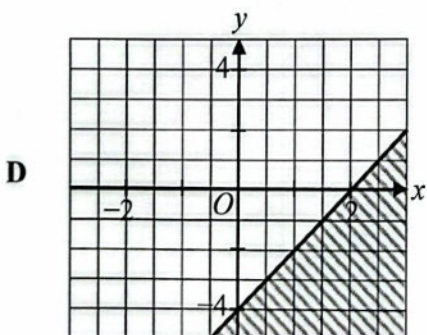
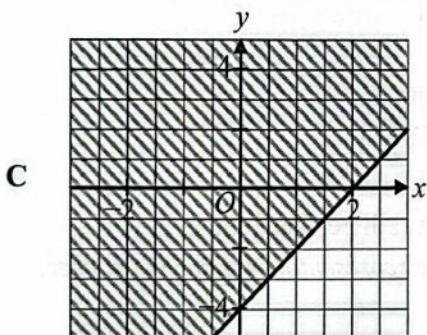
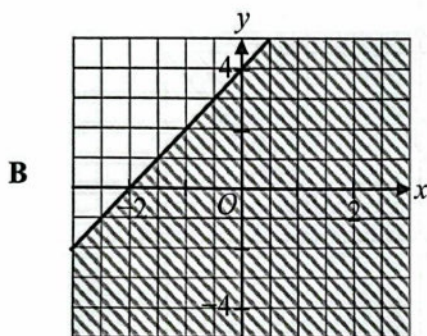
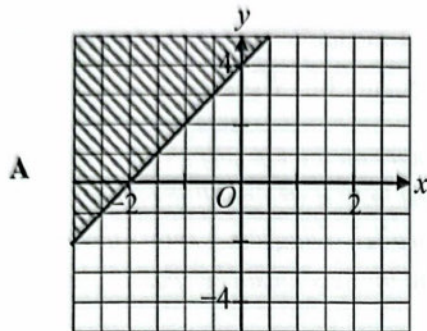
In a charity run, participants must complete the race in more than 30 minutes but less than 50 minutes. Dev completed the race in 42 minutes. What is the maximum number of minutes that can be added to Dev's time so that he still satisfies the event requirement?

- A 6 minit/ minutes
B 7 minit/ minutes
C 8 minit/ minutes
D 9 minit/ minutes



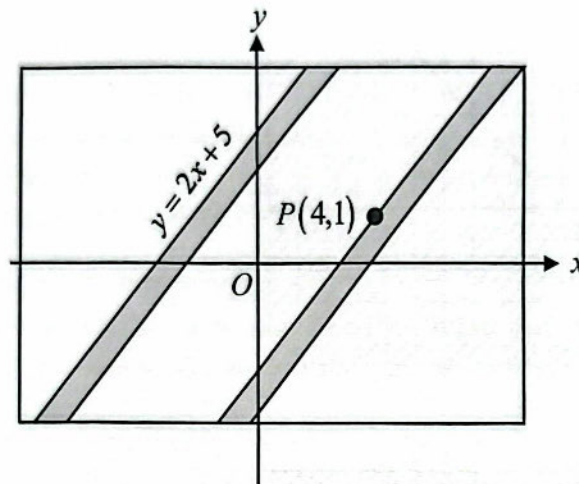
SERTAI TELEGRAM @exercise_students

- 10 Antara berikut, yang manakah mewakili rantau bagi ketaksamaan linear $2y - 4x \geq -8$?
Which of the following represents the region of linear inequality $2y - 4x \geq -8$?



- 11 Sebuah syarikat kurier menggunakan dua pelekat berwarna pada permukaan atas sebuah kotak penghantaran. Pelekat pertama dan pelekat kedua masing-masing membentuk satu garisan lurus pada permukaan kotak tersebut. Seorang pekerja mendapati bahawa kedua-dua pelekat itu adalah selari. Rajah 1 menunjukkan pelekat pertama diwakili oleh persamaan $y = 2x + 5$ dan pelekat kedua melalui titik $P(4,1)$.

A courier company uses two coloured stickers on the top surface of a delivery box. The first sticker and the second sticker each form a straight line on the surface of the box. A worker finds that the two stickers are parallel. Diagram 1 shows the first sticker is represented by the equation $y = 2x + 5$ and the second sticker passes through point $P(4,1)$.



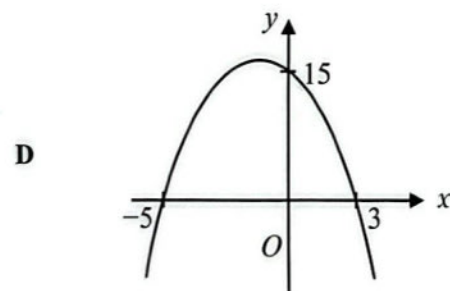
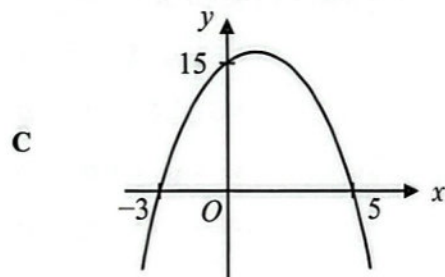
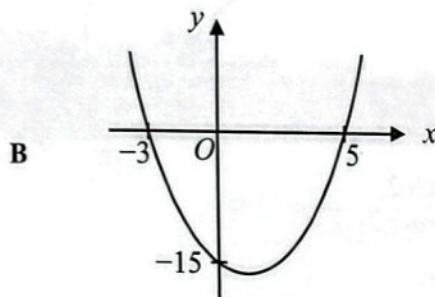
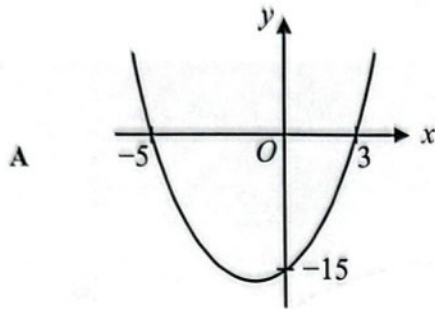
Rajah 1
Diagram 1

Tentukan persamaan garis lurus yang mewakili pelekat kedua.
Determine the equation of the straight line representing the second sticker.

- A $y = 2x + 7$
- B $y = 2x - 7$
- C $y = 2x + 2$
- D $y = 2x - 2$

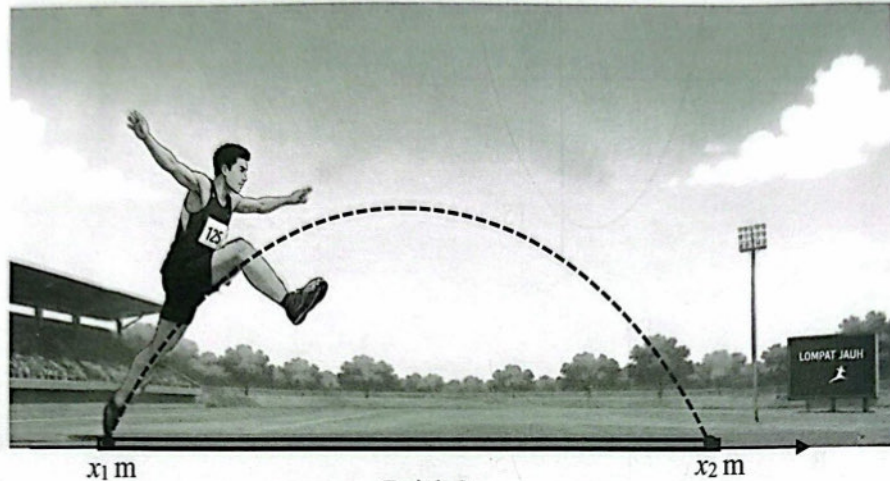
- 12 Diberi bahawa suatu fungsi kuadratik $y = px^2 - 2x + q$ dengan keadaan p dan q adalah pemalar. Graf manakah yang mewakili fungsi tersebut, jika $p = 1$ dan $q = -15$?

It is given that a quadratic function $y = px^2 - 2x + q$ such that p and q are constants. Which graph represents the function, if $p = 1$ and $q = -15$?



- 13 Semasa kejohanan olahraga di sebuah sekolah, Adam menyertai acara lompat jauh. Rajah 2 menunjukkan lintasan lompatannya yang membentuk parabola. Pergerakan lompatan tersebut diwakili oleh fungsi $f(x) = -x^2 + 6x - 8$.

During a school athletics tournament, Adam participated in the long jump event. Diagram 2 shows the path of his jump which forms a parabola. The motion of the jump is represented by the function $f(x) = -x^2 + 6x - 8$.



Rajah 2
Diagram 2

Hitung jarak lompatan Adam, dalam meter.
Calculate the distance, in metre, of Adam's jump.

- A 9
- B 7
- C 6
- D 2

14 $\begin{pmatrix} -3 & 8 \\ 2 & 4 \end{pmatrix} - \begin{pmatrix} -4 & 1 \\ 5 & -2 \end{pmatrix} + \begin{pmatrix} 4 & -1 \\ -2 & -3 \end{pmatrix} =$

A $\begin{pmatrix} -3 & 6 \\ 5 & -3 \end{pmatrix}$

B $\begin{pmatrix} 5 & 6 \\ -5 & 3 \end{pmatrix}$

C $\begin{pmatrix} -5 & -6 \\ -5 & 3 \end{pmatrix}$

D $\begin{pmatrix} 5 & 6 \\ 5 & -3 \end{pmatrix}$

- 15 Diberi bahawa M ialah matriks 2×2 dan songsangan bagi matriks M ialah:
Given that M is 2×2 matrix and the inverse of matrix M is:

$$M^{-1} = \frac{1}{-1(3) - 2(-6)} \begin{pmatrix} p & -2 \\ q & -1 \end{pmatrix}$$

Tentukan nilai p dan nilai q .

Determine the value of p and of q .

A $p = 3, q = 6$

B $p = -3, q = 6$

C $p = 3, q = -6$

D $p = -3, q = -6$

- 16 Antara berikut, yang manakah betul mengenai kelayakan pengguna untuk memiliki kad kredit?

Which of the following is correct regarding a consumer's eligibility to own a credit card?

- A Berumur sekurang-kurangnya 18 tahun dan merupakan warganegara Malaysia.
At least 18 years old and a Malaysian citizen.
- B Mempunyai pekerjaan tetap dalam sektor awam atau swasta.
Has a permanent job in the public or private sector.
- C Berpendapatan minimum RM24 000 setahun dan memenuhi syarat yang ditetapkan oleh pihak bank.
Has a minimum annual income of RM24 000 and meets the requirements set by the bank.
- D Mempunyai akaun simpanan dan telah menjadi pelanggan bank sekurang-kurangnya 5 tahun.
Has a savings account and has been a customer of the bank for at least 5 years.

- 17 Puan Alina menyimpan RM30 000 di sebuah bank yang menawarkan kadar faedah 3.5% setahun.

Hitung jumlah faedah yang akan diperolehnya selepas 3 tahun.

Puan Alina deposited RM30 000 in a bank that offers an interest rate of 3.5% per annum. Calculate the total interest she will earn after 3 years.

- A RM1 050
- B RM3 150
- C RM31 050
- D RM33 150

- 18 Jadual 1 menunjukkan maklumat pendapatan bulanan dan perbelanjaan bulanan Encik Fauzi dan isterinya. Mereka bercadang untuk membeli sebuah rumah teres dua tingkat dan perlu menyimpan RM75 000 untuk bayaran wang pendahuluan dalam tempoh 5 tahun.

Table 1 shows Encik Fauzi and his wife monthly income and expenses. They intend to buy a double-storey terrace house and need to save RM75 000 for the down payment within 5 years period.

Maklumat Kewangan <i>Financial Information</i>	Jumlah (RM) <i>Amount (RM)</i>
Pendapatan <i>Income</i>	9 000
Perbelanjaan (tetap dan tidak tetap) <i>Expenditure (fixed and varied)</i>	5 400

Jadual 1
Table 1

Hitung aliran tunai bulanan Encik Fauzi selepas ditolak simpanan bulanan yang diperlukan untuk mencapai matlamat wang pendahuluan tersebut.

Calculate Encik Fauzi's monthly cash flow after deducting the monthly savings required to achieve their down payment goal.

- A RM4 150
B RM3 600
C RM2 750
D RM2 350
- 19 Antara yang berikut, yang manakah **bukan** tujuan percukaian?
*Which of the following is **not** a purpose of taxation?*
- A Memberi keuntungan maksimum kepada syarikat swasta.
Gives maximum profits for private companies.
- B Menyediakan kemudahan awam seperti sekolah, hospital dan jalan raya.
Provide public facilities such as schools, hospitals, and roads.
- C Menjana hasil pendapatan negara untuk membiayai perbelanjaan kerajaan.
Generate national revenue to finance government expenditure.
- D Mengagihkan semula pendapatan bagi mengurangkan jurang ekonomi masyarakat.
Redistribute income and reduce economic inequality in society.

- 20 Pada tahun 2025, gaji bulanan Sofia berjumlah RM4 900 termasuk RM500 elaun tetap. Dia telah menerima bonus sebanyak RM4 400 pada tahun tersebut dan jumlah pelepasan yang dibenarkan ialah RM19 400. Selain itu, dia juga telah mendermakan sebanyak RM1 000 kepada organisasi yang telah diluluskan oleh kerajaan. Hitung pendapatan bercukai Sofia.

In 2025, Sofia's monthly salary was RM4 900, including a fixed allowance of RM500. She received a bonus of RM4 400 during that year and the total tax reliefs allowed amounted to RM19 400. In addition, she donated RM1 000 to a government-approved organization.

Calculate Sofia's chargeable income.

- A RM43 300
- B RM42 800
- C RM38 400
- D RM36 800

- 21 Rajah 3 menunjukkan hujah deduktif yang tidak lengkap.
Diagram 3 shows an incomplete deductive argument.

Premis/	:	
Premise 1	:	
Premis/	:	42 ialah gandaan 6.
Premise 2	:	42 is a multiple of 6.
Kesimpulan	:	42 ialah nombor genap.
Conclusion	:	42 is an even number.

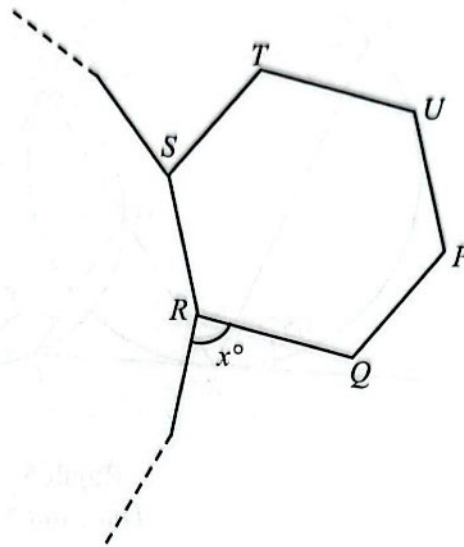
Rajah 3
Diagram 3

Antara berikut, yang manakah merupakan Premis 1 yang sah?
Which of the following statements is a valid Premise 1?

- A Jika x ialah gandaan 6, maka x ialah nombor genap.
If x is a multiple of 6, then x is an even number.
- B Jika x ialah nombor genap, maka x ialah gandaan 6.
If x is an even number, then x is a multiple of 6.
- C Jika 42 ialah gandaan 6, maka 42 ialah nombor genap.
If 42 is a multiple of 6, then 42 is an even number.
- D Jika 42 bukan nombor genap, maka 42 bukan gandaan 6.
If 42 is not an even number, then 42 is not a multiple of 6.

- 22 Rajah 4 menunjukkan gabungan sebuah heksagon sekata, $PQRSTU$ dengan sebuah poligon sekata yang mempunyai 16 sisi.

Diagram 4 shows the combination of a regular hexagon, $PQRSTU$ and a regular polygon with 16 sides.



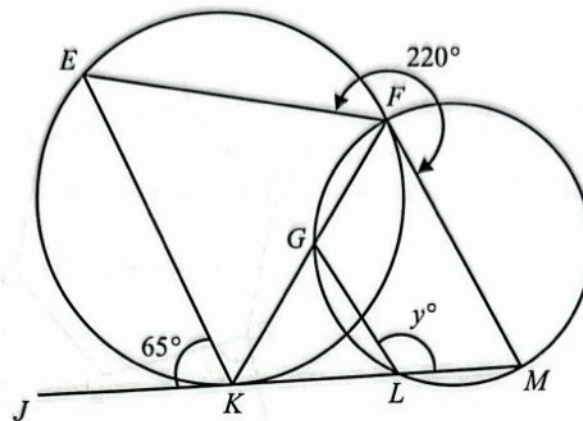
Rajah 4
Diagram 4

Cari nilai x .

Find the value of x .

- A 82.5
- B 72.0
- C 71.3
- D 41.3

- 23 Dalam Rajah 5, $JKLM$ ialah tangen kepada bulatan EFK di titik K . FGK ialah garis lurus.
In Diagram 5, $JKLM$ is a tangent to circle EFK at point K . FGK is a straight line.



Rajah 5
 Diagram 5

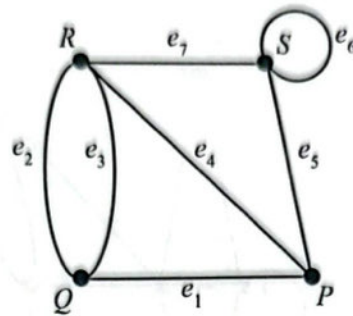
Cari nilai y .
 Find the value of y .

- A 100
- B 105
- C 115
- D 120



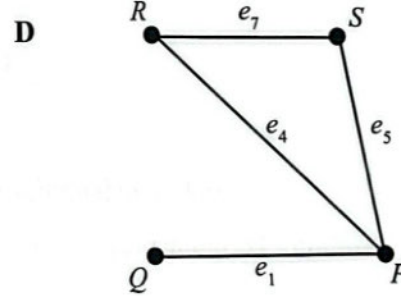
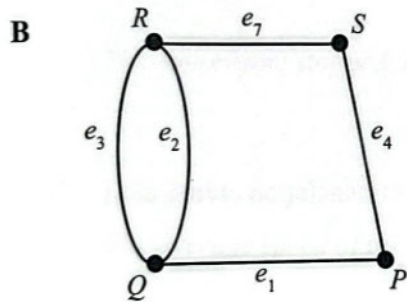
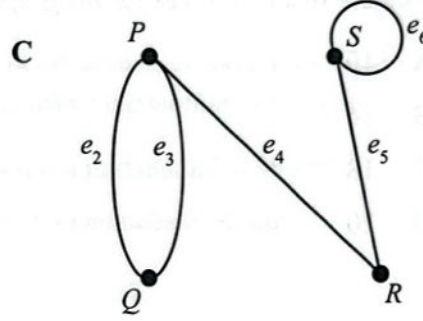
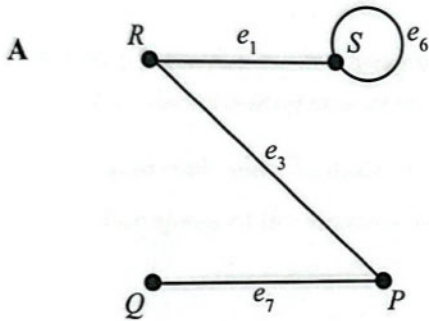
SERTAI TELEGRAM @exercise_students

- 24 Rajah 6 menunjukkan graf tak terarah dan berpemberat.
Diagram 6 shows an undirected weighted graph.

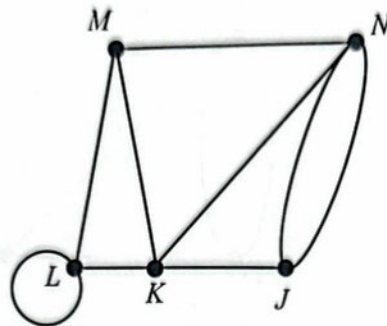


Rajah 6
Diagram 6

Antara berikut, yang manakah subgraf bagi graf tersebut?
Which of the following is a subgraph of the graph?



- 25 Rajah 6 menunjukkan suatu graf yang mempunyai gelung dan berbilang tepi.
Diagram 6 shows a graph with a loop and multiple edges.



Rajah 6
Diagram 6

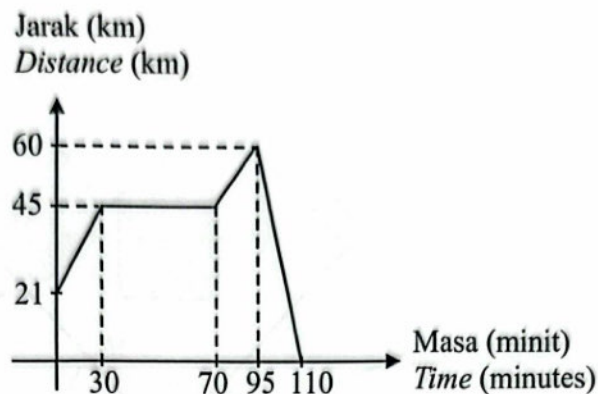
Nyatakan bilangan darjah bagi graf tersebut.

State the sum of degrees for the graph.

- A 10
- B 16
- C 18
- D 20

- 26 Rajah 7 menunjukkan graf jarak-masa bagi perjalanan sebuah motosikal dari satu bandar ke bandar yang lain.

Diagram 7 shows the distance-time graph for the journey of a motorcycle from a town to another.



Rajah 7
Diagram 7

Antara pernyataan berikut yang manakah betul tentang gerakan motosikal itu?
Which of the following statement is correct about the motion of the motorcycle?

- A Laju motosikal itu dalam tempoh 30 minit pertama ialah 90 kmj^{-1} .

The speed of the motorcycle in the first 30 minutes is 90 kmh^{-1} .

- B Motosikal itu berhenti selama $\frac{1}{3}$ jam.

The motorcycle stopped for $\frac{1}{3}$ hours.

- C Laju purata perjalanan motosikal tersebut ialah 54 kmj^{-1} .

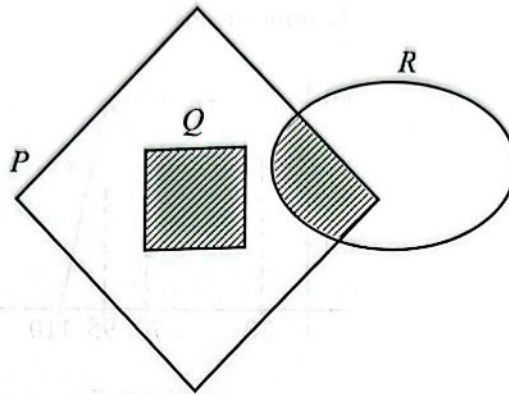
The average speed of the motorcycle for the journey is 54 kmh^{-1} .

- D Jumlah jarak perjalanan motosikal itu ialah 120 km.

The total distance travelled by the motorcycle is 120 km.

- 27 Rajah 8 ialah gambar rajah Venn yang menunjukkan set P , set Q dan set R dengan keadaan set semesta, $\xi = P \cup Q \cup R$.

Diagram 8 is a Venn diagram that shows set P , set Q and set R such that the universal set, $\xi = P \cup Q \cup R$.



Rajah 8
Diagram 8

Set manakah mewakili rantau berlorek?

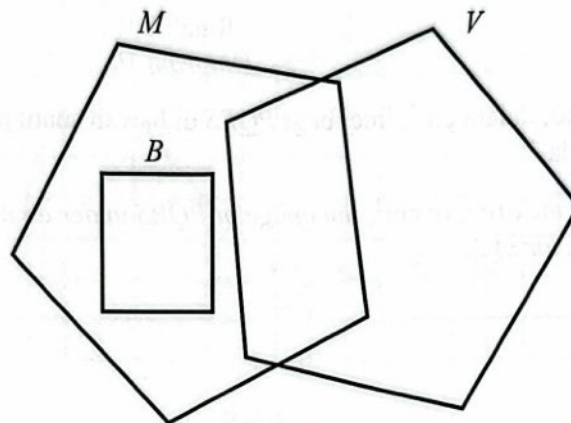
Which set represents the shaded region?

- A $(P \cup Q) \cap R$
- B $P \cup (Q \cap R)$
- C $(P \cap Q) \cup R$
- D $P \cap (Q \cup R)$

- 28 Rajah 9 menunjukkan set M , set B dan set V . Diberi bahawa set semesta, $\xi = M \cup B \cup V$,
set $M = \{\text{murid yang suka memancing}\}$,
set $B = \{\text{murid yang suka bermain bola sepak}\}$,
set $V = \{\text{murid yang suka bermain permainan video}\}$.

Diagram 9 shows set M , set B and set V . It is given that universal set, $\xi = M \cup B \cup V$,

set $M = \{\text{pupils who like fishing}\}$,
set $B = \{\text{pupils who like to play football}\}$,
set $V = \{\text{pupils who like to play video games}\}$.



Rajah 9
Diagram 9

Bilangan murid yang suka memancing, bermain bola sepak dan bermain permainan video masing-masing ialah 17 orang, 7 orang dan 26 orang.

Diberi bilangan murid yang suka memancing atau bermain permainan video ialah lima kali ganda murid yang suka bermain bola sepak.

Cari bilangan murid yang suka memancing sahaja.

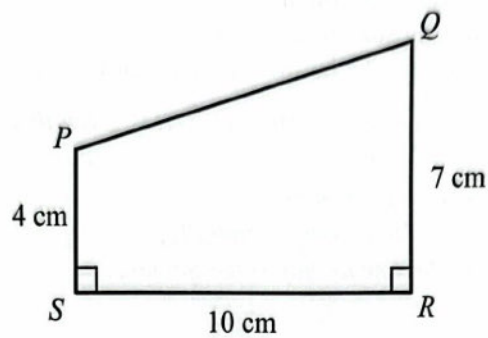
The number of pupils who like fishing, playing football and playing video games are 17 pupils, 7 pupils and 26 pupils respectively.

Given that the number of pupils who like fishing or playing video games is five times the number of pupils who like playing football.

Find the number of pupils who like fishing only.

- A 2
- B 8
- C 10
- D 18

- 29 Rajah 10 menunjukkan sebuah trapezium $PQRS$.
Diagram 10 shows a trapezium $PQRS$.



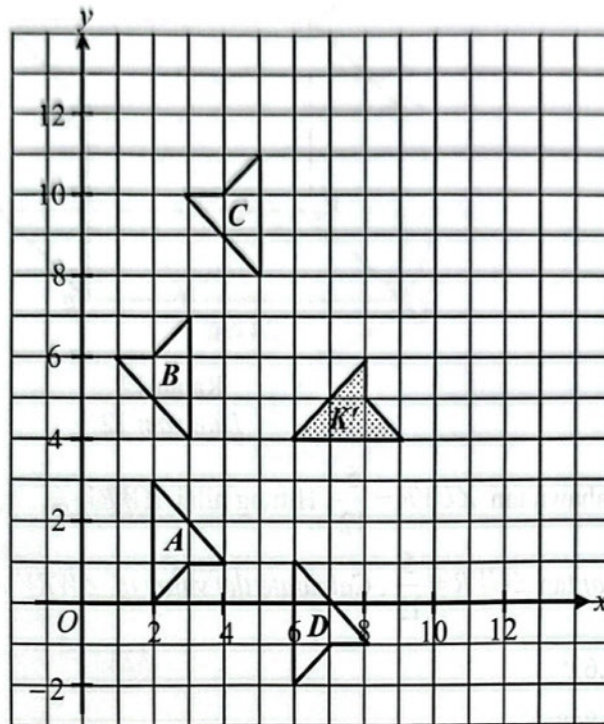
Rajah 10
Diagram 10

Hitung luas, dalam cm^2 , imej bagi $PQRS$ di bawah suatu pembesaran dengan faktor skala 3.

Calculate the area, in cm^2 , the image of $PQRS$ under an enlargement with a scale factor of 3.

- A 990
- B 495
- C 420
- D 165

- 30 Rajah 11 menunjukkan lima sisi empat.
Diagram 11 shows five quadrilateral.



Rajah 11
Diagram 11

Sisi empat K' ialah imej bagi satu sisi empat di bawah gabungan transformasi MN . Diberi transformasi M ialah suatu putaran 90° lawan arah jam pada pusat $(4, 4)$ dan transformasi

N ialah translasi $\begin{pmatrix} 2 \\ -1 \end{pmatrix}$.

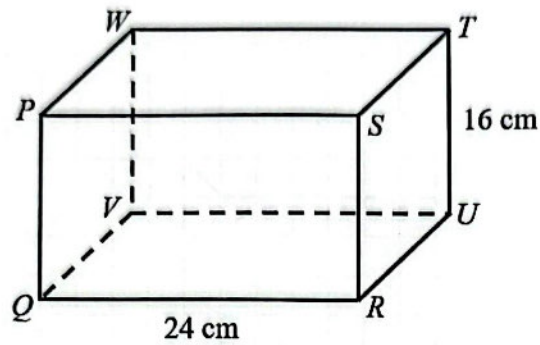
Antara sisi empat A , B , C atau D , yang manakah objek bagi sisi empat K' .

Quadrilateral K' is the image of a quadrilateral under a combined transformation MN . Given M is a rotation of 90° anticlockwise at center $(4, 4)$ and transformation N is a

translation $\begin{pmatrix} 2 \\ -1 \end{pmatrix}$.

Which quadrilaterals A , B , C or D , is an object of quadrilaterals K' .

- 31 Rajah 12 menunjukkan sebuah kuboid $PQRSTUVW$.
Diagram 12 shows a cuboid $PQRSTUVW$.



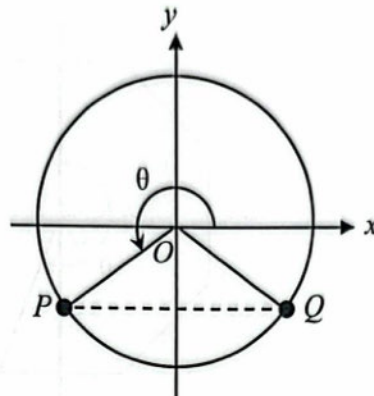
Rajah 12
Diagram 12

Diberi bahawa $\tan \angle UVR = \frac{5}{12}$. Hitung nilai $\angle WRV$.

Given that $\tan \angle UVR = \frac{5}{12}$. Calculate the value of $\angle WRV$.

- A 31.61°
- B 35.84°
- C 46.24°
- D 50.91°

- 32 Rajah 13 menunjukkan sebuah bulatan unit.
Diagram 13 shows a unit circle.



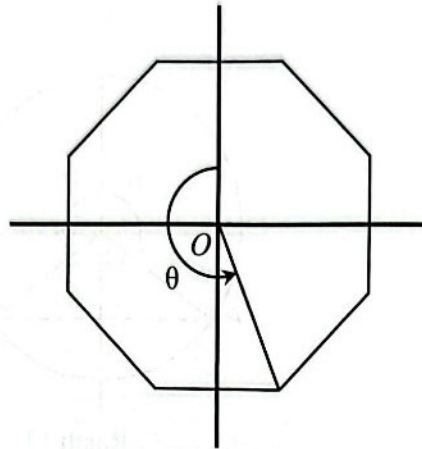
Rajah 13
Diagram 13

Diberi bahawa $\tan \theta = 0.6494$.
Tentukan koordinat Q .

*Given that $\tan \theta = 0.6494$.
Determine the coordinate of Q .*

- A (0.5446, 0.8387)
- B (0.5446, -0.8387)
- C (0.8387, 0.5446)
- D (0.8387, -0.5446)

- 33 Rajah 14 menunjukkan sebuah oktagon sekata yang dibahagi empat bahagian sekata.
Diagram 14 shows a regular octagon divided by four equal sections.



Rajah 14
Diagram 14

Hitung nilai kos θ .

Calculate the value of $\cos \theta$.

- A -0.9239
B -0.7071
C 0.7071
D 0.9239
- 34 Diberi beza nilai digit 3 bagi nombor 4231_p dan 2132_q ialah 6. Manakala hasil darab nilai digit 1 bagi nombor 135_p dan 441_q ialah 49.

Hitung nilai bagi pq .

Given the difference of digit value 3 for numbers 4231_p and 2132_q is 6. While the product of digit value 1 for numbers 135_p and 441_q is 49.

Calculate the value of pq .

- A 20
B 25
C 30
D 35

- 35 Sebuah pencetak 3D digunakan untuk mencetak sebuah cenderamata bermula pada pukul 7:30 a.m. Pada pukul 8:15 a.m., operator mendapati bahawa 30% daripada cenderamata tersebut telah berjaya dicetak. Pada pukul berapakah cenderamata itu akan siap dicetak sepenuhnya?

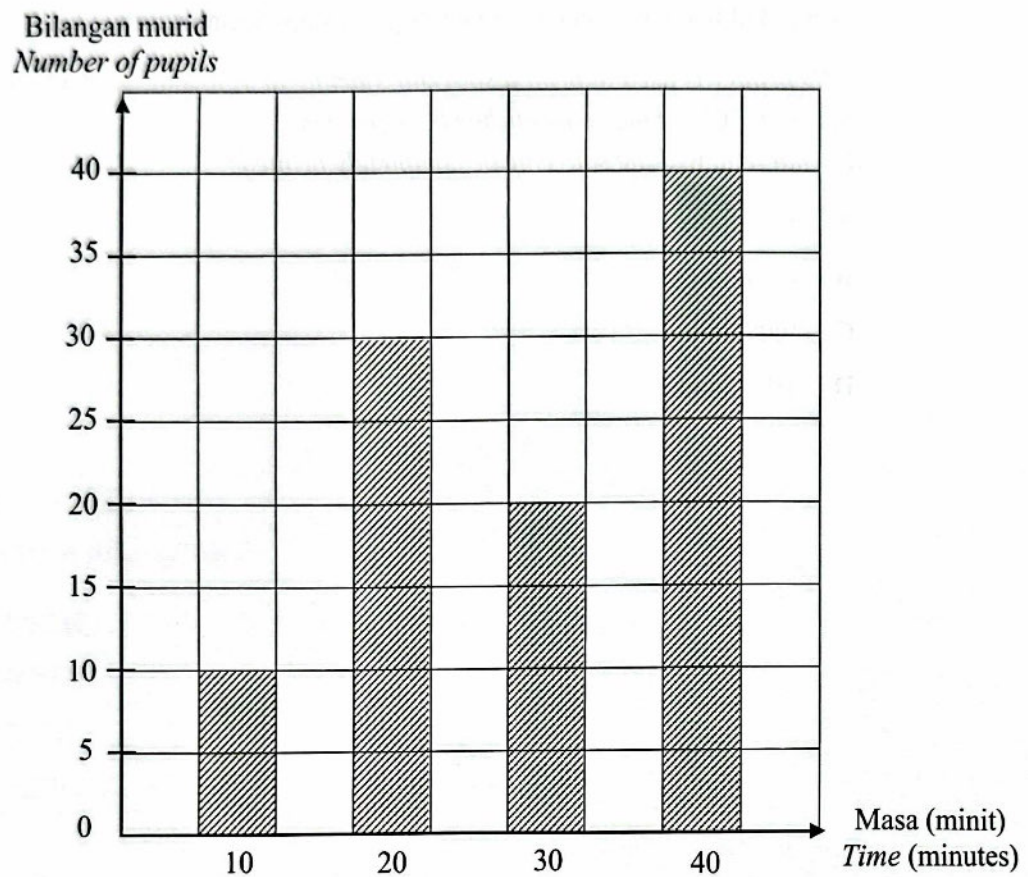
A 3D printer is used to print a souvenir starting at 7:30 a.m. At 8:15 a.m., the operator finds that 30% of the souvenir has been printed. At what time will the souvenir be completely printed?

- A 8:14 a.m
- B 8:57 a.m
- C 9:00 a.m
- D 10:00 a.m



SERTAI TELEGRAM @exercise_students

- 36 Rajah 15 ialah carta palang yang menunjukkan masa yang diambil, dalam minit, oleh sekumpulan murid untuk menjawab kuiz matematik.
Diagram 15 shows a bar chart of the time taken, in minutes, of a group of pupils to answer a mathematics quiz.

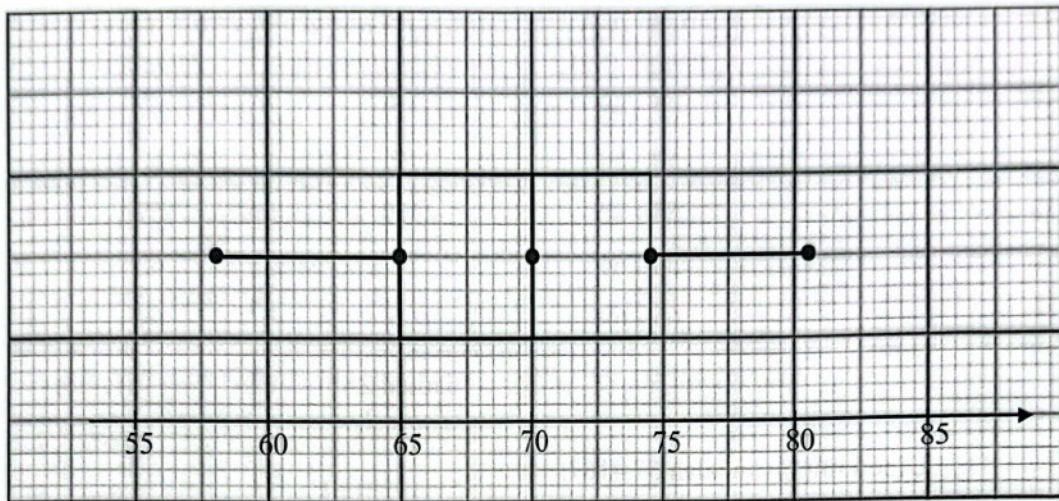


Rajah 15
Diagram 15

Hitung nilai median.
Calculate the value of median.

- A 25
- B 30
- C 40
- D 50

- 37 Rajah 16 menunjukkan suatu plot kotak.
Diagram 16 shows a box-plot.



Rajah 16
Diagram 16

Tentukan julat antara kuartil.
Determine the interquartile range.

- A 9.0
- B 9.5
- C 22.5
- D 23.0

- 38 Jadual 2 menunjukkan rekod berat, dalam kg, bagi murid-murid kelas 5 Al-Fattah.
Table 2 shows a record of weight, in kg, pupils of class 5 Al-Fattah.

Berat (kg) <i>Weight (kg)</i>	Bilangan murid <i>Number of pupils</i>	Titik Tengah <i>Midpoint</i>
45 – 49	5	47
50 – 54	7	52
55 – 59	10	57
60 – 64	8	62
65 – 69	6	67

Jadual 2
Table 2

Diberi min jisim ialah 57.4167.

Hitung sisihan piawai rekod tersebut.

Given that the mean mass is 57.4167.

Calculate the standard deviation of the records.

- A 6.38
B 6.65
C 6.94
D 7.07
- 39 Kebarangkalian sebiji mentol rosak ialah $\frac{1}{2}$. Dua biji mentol dipilih secara rawak.
Jika ujian dilakukan sebanyak 100 kali, berapakah kali sekurang-kurangnya satu mentol rosak ditemui?

The probability of a bulb broken is $\frac{1}{2}$. Two bulbs are chosen at random.

If the test is repeated 100 times, how many times was at least one faulty bulb found?

- A 25
B 50
C 75
D 100

- 40 Seorang penerjun negara perlu melakukan tiga terjunan pada pusingan kelayakan. Kebarangkalian penerjun membuat kesilapan teknikal semasa terjunan dalam mana-mana pusingan ialah 0.2. Jika kesilapan teknikal dilakukan, mata tidak diberikan dan penerjun tidak layak ke peringkat akhir. Kebarangkalian penerjun itu mendapat mata daripada juri ialah 0.85 dengan syarat kesemua tiga terjunannya sempurna tanpa kesilapan teknikal. Hitung kebarangkalian penerjun itu layak ke peringkat akhir.

A national diver is required to perform three dives in the qualifying round. The probability of a diver makes a technical error in any round is 0.2. If a technical error is made, points will not be given and the diver will not qualify for the finals. The probability of a diver receiving points from the judges is 0.85, provided that all three of their qualifying dives are free from technical errors.

Calculate the probability that the diver qualifies for the final round.

- A 0.435
- B 0.512
- C 0.544
- D 0.612



KERTAS SOALAN TAMAT
END OF QUESTION PAPER