

SULIT

1

1449/1

1449/1
Matematik
Kertas 1
 $1\frac{1}{2}$ jam

NAMA :
TINGKATAN :

MODUL KECEMERLANGAN SPM TAHUN 2024

TINGKATAN 5

MATEMATIK
Kertas 1
Satu jam tiga puluh minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. Kertas soalan ini mengandungi 40 soalan dalam dwibahasa.
2. Jawab semua soalan.
3. Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.
4. Senarai rumus disediakan di halaman 2 hingga 4.
5. Anda dibenarkan menggunakan kalkulator saintifik.

Join Telegram : https://t.me/exercise_students

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

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

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

8 Premium = $\frac{\text{Nilai muka polisi}}{\text{RMx}} \times (\text{Kadar premium per RMx})$

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

9 Jumlah insurans yang harus dibeli = (Peratusan ko-insurans) x (Nilai boleh insurans harta)

Amount of required insurance = (\text{Percentage of co-insurance}) \times (\text{Insurable value of property})

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{Total distance}{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 Pithagoras, $c^2 = a^2 + b^2$
Pythagoras Theorem, $c^2 = a^2 + b^2$
- 2 Hasil tambah sudut pedalaman poligon = $(n - 2) \times 180^\circ$
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 = πr^2
Area of circle = πr^2
- 5
$$\frac{\text{Panjang lengkok}}{\text{Lilitan bulatan}} = \frac{\text{Sudut di pusat}}{360^\circ}$$

$$\frac{\text{Length of arc}}{\text{Circumference of circle}} = \frac{\text{Angle subtended at centre}}{360^\circ}$$
- 6
$$\frac{\text{Luas sektor}}{\text{Luas bulatan}} = \frac{\text{Sudut di pusat}}{360^\circ}$$

$$\frac{\text{Area of sector}}{\text{Area of circle}} = \frac{\text{Angle subtended at centre}}{360^\circ}$$
- 7 Luas 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 = $2\pi r^2 + 2\pi r h$
Surface area of cone = $2\pi r^2 + 2\pi r h$
- 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 Isipadu prisma tegak = luas keratan rentas \times tinggi
Volume of right prism = cross sectional area \times height
- 13 Isipadu silinder = $\pi r^2 h$
Volume of cylinder = $\pi r^2 h$

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

Jawab semua soalan
Answer all the question

- 1 Apakah nilai yang sesuai diletakkan di dalam kotak dibawah?
What the appropriate value placed in the box below?

$$5.05 + \frac{2}{5} \times (-3.5) = \square \times 2.4$$

- A $\frac{43}{16}$
B $\frac{16}{43}$
C $\frac{48}{73}$
D $\frac{73}{48}$
- 2 Antara yang berikut, yang manakah benar berkaitan dengan punca kuasa dua sempurna?
Which of the following is true regarding the perfect square root?
- A $\sqrt{36} = \sqrt{6 \times 6}$
B $\sqrt{64} = \sqrt{2 \times 32}$
C $\sqrt{24} = \sqrt{4.9 \times 4.9}$
D $\sqrt{45} = \sqrt{3 \times 15}$
- 3 Jadual 1 menunjukkan nisbah skor yang diperolehi Kumpulan P dan Kumpulan Q dalam suatu pertandingan kuiz.

Table 1 shows the ratio of scores obtained by Group P and Group Q in a quiz competition.

Nisbah skor Kumpulan P <i>Group P score ratio</i>	Nisbah skor Kumpulan Q <i>Group Q score ratio</i>
Cheng : Rahimi : Hussin	Nureen : Bala : Shanthy
5 : 4 : 7	3 : 2 : 1

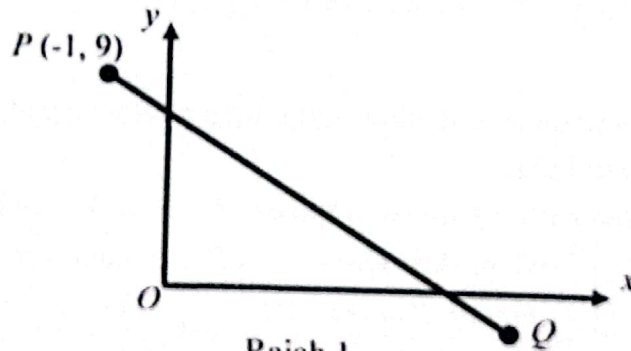
Jadual 1/ Table 1

Jumlah skor Kumpulan P ialah 144 manakala jumlah skor Kumpulan Q ialah 168. Cari hasil tambah skor Rahimi dan Nureen.

The total score of Group P is 144 while the total score of Group Q is 168. Find the sum of the scores of Rahimi and Nureen.

- A 60
B 84
C 120
D 147

- 4 Bundarkan 0.060541 kepada tiga angka bererti.
Round off 0.060541 correct to three significant figures.
- A 0.061
B 0.0605
C 0.0606
D 0.0610
- 5 Ungkapkan 3.18×10^{-2} sebagai nombor tunggal.
Express 3.18×10^{-2} as a single number.
- A 0.318
B 0.0318
C 0.00318
D 0.000318
- 6 Rajah 1 menunjukkan garis PQ pada satu satah Cartes.
Diagram 1 shows the line PQ on a Cartesian plane.



Rajah 1
Diagram 1

Diberi kecerunan garis lurus PQ ialah $\frac{-3}{2}$. Cari pintasan $-x$.

Given that gradient of the straight-line PQ is $\frac{-3}{2}$. Find the x -intercept.

- A 8
B 6
C 5
D 4

- 7 Jadual 2 di bawah menunjukkan nilai bagi fungsi $y = -x^2 + 6x - 5$.

Table 2 below shows the values of function $y = -x^2 + 6x - 5$.

x	-2	-1	0	0.5	1	1.5	2.5
y	-13	-10	-5	m	2	6.25	n

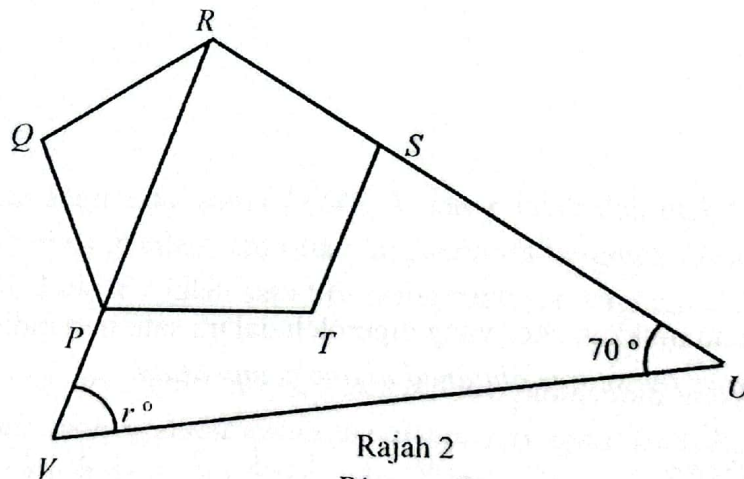
Jadual 2

Table 2

Hitung nilai m dan n .

Calculate value of m and n .

- A $m = 2.25, n = -3.75$
 B $m = 2.25, n = 3.75$
 C $m = -2.25, n = -3.75$
 D $m = -2.25, n = 3.75$
- 8 Dalam Rajah 2, $PQRST$ ialah sebuah pentagon sekata, RSU dan RPV ialah garis lurus.
 In Diagram 2, $PQRST$ is a regular pentagon, RSU and RPV are straight lines.



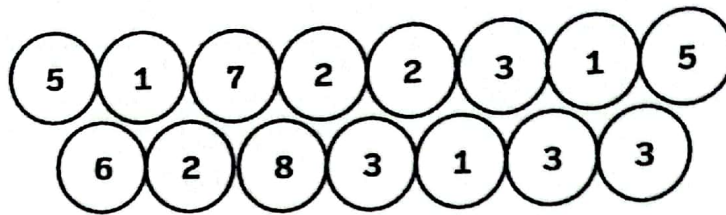
Rajah 2
Diagram 2

Cari nilai r .

Find the value of r .

- A 36
 B 38
 C 50
 D 72

- 9 Rajah 3 menunjukkan suatu set 15 nombor .
Diagram 3 shows a set of 15 cards.



Rajah 3
Diagram 3

Satu kad dipilih secara rawak. Cari kebarangkalian bahawa satu kad yang di pilih ialah kad yang berlabel nombor perdana.

A card is chosen at random. Find the probability that the number chose is a prime number.

- A $\frac{2}{3}$
B $\frac{1}{3}$
C $\frac{3}{5}$
D $\frac{7}{15}$
- 10 Jadual 3 menunjukkan skor yang diperoleh dalam satu pertandingan.
Table 3 shows the scores obtained in one competition.

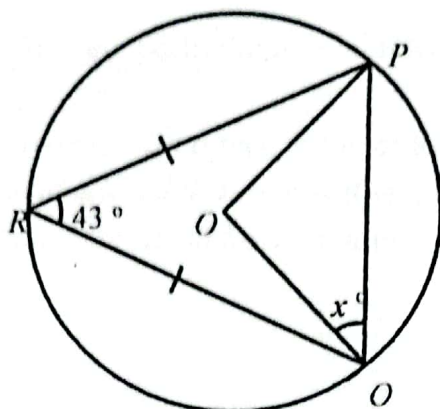
Skor/Score	0	1	2	3	4	5
Kekerapan/Frequency	3	4	7	6	x	2

Jadual 3
Table 3

Diberi median ialah 3. Antara berikut yang manakah nilai yang mungkin bagi x ?
Given that the median is 3. Which of the following is a possible value for x ?

- A 3
B 4
C 6
D 7

- 11 Rajah 4 menunjukkan sebuah bulatan berpusat O .
Diagram 4 shows a circle with centre O .

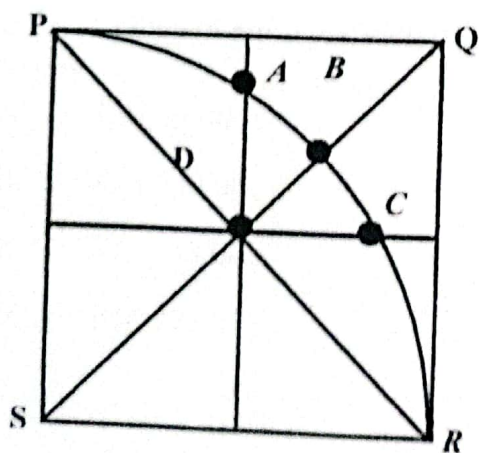


Rajah 4
 Diagram 4

Hitung nilai x .

Calculate the value of x .

- A 45
 B 47
 C 50
 D 55
- 12 Rajah 5 menunjukkan segiempat sama $PQRS$. X dan Y ialah dua titik yang bergerak dalam segiempat sama itu. Locus X ialah satu titik yang sentiasa bergerak di mana jaraknya adalah sama dari PQ dan SR . Locus Y ialah satu titik yang sentiasa bergerak dan berjarak sama dari titik S .
- Diagram 5 shows the square $PQRS$. X and Y are the two points that move in the square. Locus X is a constantly moving point where the distance is equal from PQ and SR . Locus Y is a point that is constantly moving and is the same distance from the point S .*



Rajah 5/ Diagram 5

Antara titik A , B , C dan D , yang manakah titik persilangan bagi locus X dan Y ?

Which of the points A , B , C and D , is the point of intersection of locus of X and Y ?

- 13 Antara berikut, yang manakah mempunyai nilai terkecil?
Which of the following has the smallest value?
- A 56_8
 - B 105_7
 - C 1021_3
 - D 10111_2
- 14 Rizman menyimpan sebanyak RM6500 di sebuah bank dengan kadar faedah mudah $x\%$ setahun. Jumlah simpanan Rizman pada akhir tahun keempat adalah sebanyak RM7410. Hitung nilai x .
Rizman deposits RM6500 in a bank which pays a simple interest rate of $x\%$ per annum. The total saving of Rizman at the end of the fourth years is RM7410. Calculate the value of x .
- A 2.8
 - B 3.0
 - C 3.5
 - D 4.0
- 15 Permudahkan // *Simplify*
- $(m^2n)^4 \div m^2n$
- A $m^6 n^3$
 - B $m^4 n^3$
 - C $m^7 n^4$
 - D $m^8 n^4$

- 16 Kevin ingin membeli insurans hayat dengan nilai muka sebanyak RM150 000. Kadar premium tahunan bagi setiap RM1 000 nilai muka yang di tawarkan kepada Kevin ialah RM 2.12.
Berapakah premium bulanan yang perlu dibayar oleh Kevin?

Kevin wants to buy life insurance with a face value of RM150 000. The annual premium rate for every RM1 000 face value offered to Kevin is RM 2.12.

How much monthly premium does Kevin have to pay?

- A RM26.50
B RM73.58
C RM150.00
D RM318.00
- 17 Jadual 4 menunjukkan kadar cukai jalan bagi sebuah kereta.
Table 4 shows the road tax rate for a car.

Kapasiti Enjin <i>Engine capacity</i>	Kadar asas <i>Basic rate</i>	Kadar progresif <i>Progressive rate</i>
1 801 cc – 2 000 cc	RM280.00	+ RM0.50 setiap cc melebihi 1800 cc + RM0.50 for every cc over 1800 cc
2 001 cc – 2 500 cc	RM380.00	+ RM1.00 setiap cc melebihi 2000 cc + RM1.00 for every cc over 2000 cc

Jadual 4

Table 4

Jika Encik Othman mempunyai kereta dengan kapasiti enjin 1950 cc, hitung cukai jalan yang perlu dibayarnya.

If Encik Othman has a car with an engine capacity of 1950 cc, calculate the road tax he has to pay.

- A RM 75.00
B RM 280.00
C RM 355.00
D RM 975.00

- 18 Diberi bahawa P berubah secara songsang dengan kuasa dua Q dan secara langsung dengan punca kuasa dua R . Cari hubungan antara P , Q dan R .

Given that P varies inversely with the square of Q and directly with the square root of R . Find the relationship between P , Q and R .

- A $\frac{P \propto Q^2}{\sqrt{R}}$
- B $\frac{P \propto R^2}{\sqrt{Q}}$
- C $\frac{P \propto \sqrt{Q}}{R^2}$
- D $\frac{P \propto \sqrt{R}}{Q^2}$

- 19 Jadual 5 menunjukkan masa yang diperlukan untuk menyiapkan satu lembaran kerja, m dan bilangan murid n .

Table 5 shows the time required to complete one worksheet, m and the number of student n .

m	n
18	2
x	3

Jadual 5

Table 5

Diberi bahawa m berubah secara songsang dengan kuasa dua bilangan murid, n . Cari nilai x .

Given that m varies inversely with the square of the number of students, n . Find the value of x .

- A 8
- B 12
- C 18
- D 40.5

20 Selesaikan penambahan matriks berikut.

Complete the addition of the following matrices.

$$\begin{pmatrix} 6 & 0 \\ 3 & 2 \\ -2 & -5 \end{pmatrix} + \begin{pmatrix} 4 & 0 \\ 3 & 2 \\ -2 & -5 \end{pmatrix}$$

A $\begin{pmatrix} -10 & 0 \\ 6 & -4 \\ -4 & 10 \end{pmatrix}$

C $\begin{pmatrix} 0 & 10 \\ 4 & 6 \\ -10 & -4 \end{pmatrix}$

B $\begin{pmatrix} 10 & 0 \\ 6 & 4 \\ -4 & -10 \end{pmatrix}$

D $\begin{pmatrix} 10 & 10 \\ 0 & -4 \\ 1 & 5 \end{pmatrix}$

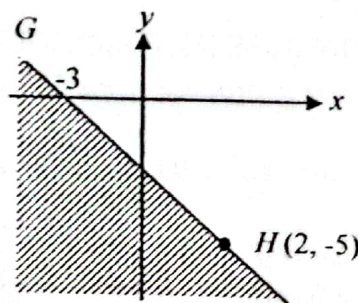
21 Jika $p \begin{pmatrix} 8 \\ 3 \end{pmatrix} - 2 \begin{pmatrix} 0 \\ 6 \end{pmatrix} = 2 \begin{pmatrix} 4p \\ -3 \end{pmatrix}$. Cari nilai p .

If $p \begin{pmatrix} 8 \\ 3 \end{pmatrix} - 2 \begin{pmatrix} 0 \\ 6 \end{pmatrix} = 2 \begin{pmatrix} 4p \\ -3 \end{pmatrix}$. Find the value of p .

- A 0
- B 2
- C -6
- D 6

22 Rajah 6 menunjukkan satu garis lurus GH yang dilukis pada satah Cartes.

Diagram 6 shows a straight line GH drawn in a Cartesian plane.



Rajah 6/ Diagram 6

Tentukan ketaksamaan yang mewakili kawasan berlorek.

Determine the inequality that represent the shaded region.

- A $y < -2x - 3$
- B $y < -x + 3$
- C $y \leq -2x + 3$
- D $y \leq -x - 3$

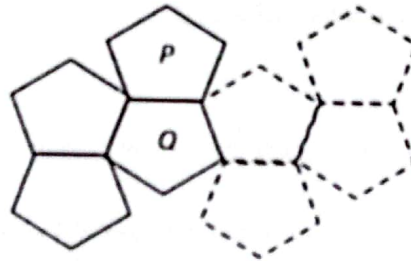
- 23 Diberi bahawa $16^{2x+3} = 64^{4x-6}$. Hitung nilai x .

Given that $16^{2x+3} = 64^{4x-6}$. Calculate the value of x .

- A 1
B 2
C 3
D 4

- 24 Rajah 7 menunjukkan suatu bentuk teselasi yang terdiri daripada pentagon yang dihasilkan dengan transformasi isometri.

Diagram 7 shows a tessellation consisting of pentagon which are produced by isometric transformation.

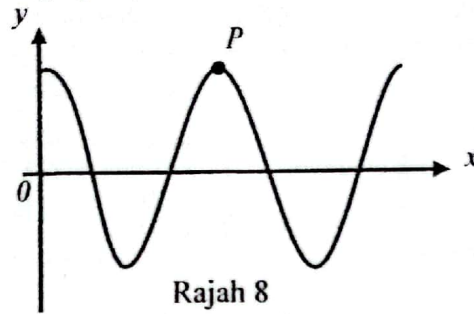


Rajah 7
Diagram 7

Apakah transformasi yang terlibat dalam menghasilkan bentuk Q daripada bentuk P ?
What is the transformation involve to produce shape Q from shape P ?

- A Pantulan / Reflection
B Translasi / Translation
C Putaran / Rotation
D Pantulan dan Putaran / Reflection and rotation

- 25 Rajah 8 menunjukkan sebahagian graf bagi fungsi $y = 3 \cos 2x$ untuk $x \geq 0^\circ$.
Diagram 8 shows part of the graph of the function $y = 3 \cos 2x$ untuk $x \geq 0^\circ$.

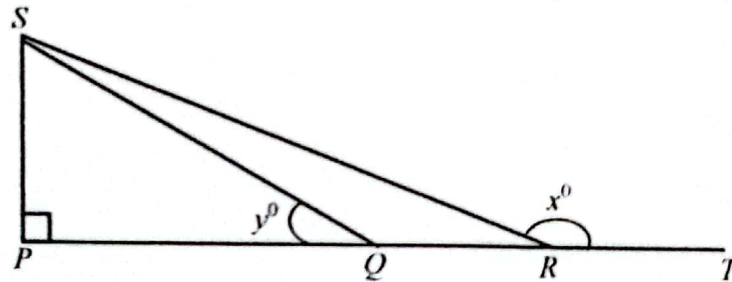


Rajah 8
Diagram 8

Cari koordinat titik P .

Find the coordinates of point P .

- A (180, 2)
B (180, 3)
C (360, 2)
D (360, 3)
- 26 Rajah 9 menunjukkan dua buah segitiga bersudut tegak PQS dan PRS . $PQRT$ ialah garis lurus.
Diagram 9 shows two right angled triangles PQS dan PRS . $PQRT$ is a straight line.



Rajah 9/ Diagram 9

Diberi $QR = 7$ cm dan $\cos y = \frac{20}{29}$. Tentukan nilai $\tan x$.

Given $QR = 7$ cm and $\cos y = \frac{20}{29}$. Determine the value of $\tan x$.

- A $-\frac{9}{7}$
B $\frac{7}{11}$
C $-\frac{7}{9}$
D $\frac{9}{7}$

27 Diberi $2p - 6q = \frac{4+pq}{3}$, Ungkapkan q dalam sebutan p .

Given that $2p - 6q = \frac{4+pq}{3}$, Express q in term of p .

A $q = \frac{6p - 4}{p + 18}$

B $q = \frac{6p + 4}{p - 18}$

C $q = \frac{4p - 6}{p - 18}$

D $q = \frac{6p - 4}{p - 18}$

28 Sebuah kotak mempunyai 7 buah buku. Min bagi sebuah buku ialah 1.6kg. Sebuah buku dengan jisim 1.92kg ditambah ke dalam kotak tersebut. Hitung min jisim baru dalam kg sebuah buku.

A box have seven books. The mean mass of a book is 1.6kg. A book with a mass 1.92kg is added into the box. Calculate the new mean mass in kg of a book.

A 1.64

B 1.76

C 1.87

D 1.88

29 Maklumat berikut menunjukkan satu set data.

The following information shows a set of data.

3, 3, 6, 4, 5, 9, 7

Setiap nilai dalam set data itu ditolak dengan 2. Antara yang berikut, yang manakah nilainya akan berubah?

Each value in the set of data is reduced by 2. Which of the following will change its value?

A Min / Mean

B Varians / Variance

C Sisihan piawai / Standard deviation

D Julat antara kuartil / Interquartile range

- 30 Rajah 10 menunjukkan kotak P dan kotak Q masing-masing mengandungi empat keping kad berlabel dengan nombor dan tiga keping kad yang berlabel dengan huruf.

Diagram 10 shows box P and box Q contain of four card labelled with numbers and three cards labelled with letters respectively.



Kotak P
Box P

Rajah 10
Diagram 10

Kotak Q
Box Q

Sekeping kad dipilih secara rawak masing-masing dari kotak P dan kotak Q . Hitung kebarangkalian mendapat faktor bagi 27 dan huruf vokal.

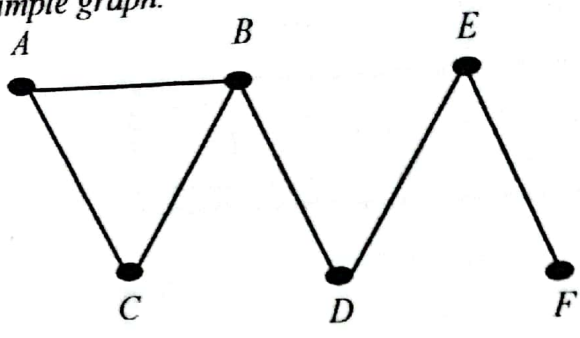
A card is randomly selected from boxes P and Q squares respectively. Calculate the probability of getting a factor of 27 and vowel.

- A $\frac{4}{49}$
 B $\frac{6}{49}$
 C $\frac{1}{3}$
 D $\frac{1}{2}$
- 31 Permudahkan/ Simplify:

$$\frac{m-4}{2m} - \frac{m-2p}{mp}$$

- A $\frac{mp - 8p - 2m}{2mp}$
 B $\frac{mp + 8p + 2m}{2mp}$
 C $\frac{p-2}{2p}$
 D $\frac{p+2}{2p}$

32 Rajah 11 menunjukkan suatu graf mudah.
 Diagram 11 below shows a simple graph.

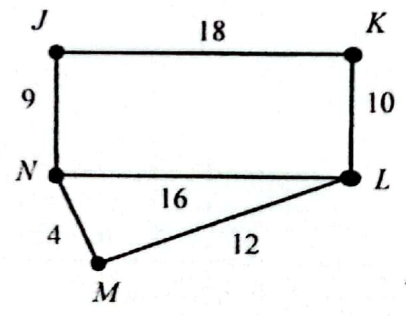


Rajah 11
 Diagram 11

Hitung darjah bagi graf mudah di atas.
 Calculate the degree of simple graph above.

- A 6
- B 8
- C 12
- D 14

33 Rajah 12 menunjukkan titik J, K, L, M dan N ialah lima stesen bagi suatu rangkaian lintasan komuter. Berat yang ditunjukkan pada tepi mewakili jarak, dalam km, antara dua stesen.
 Diagram 12 shows points J, K, L, M and N are five stations for a commuter crossing network. The weights shown on the edges represent the distance in km between two stations.



Rajah 12
 Diagram 12

Cari panjang dalam km, lintasan terpanjang dari stesen K ke M.
 Find the longest distance in km from station K to station M.

- A 55
- B 40
- C 31
- D 22

- 34 Antara ayat berikut, yang manakah merupakan satu pernyataan **benar**?

*Which of the following sentences is a **true** statement?*

- A 9 ialah nombor perdana
9 is a prime number
- B 16 boleh dibahagi tepat dengan 10
16 is divisible by 10
- C 81 ialah nombor kuasa dua sempurna
81 is a perfect square number
- D $6^4 = 4^6$

- 35 Maklumat di bawah menunjukkan satu implikasi.

The information below shows an implication.

Jika $4x + 5 = 21$, maka $x = 4$

If $4x + 5 = 21$, then $x = 4$

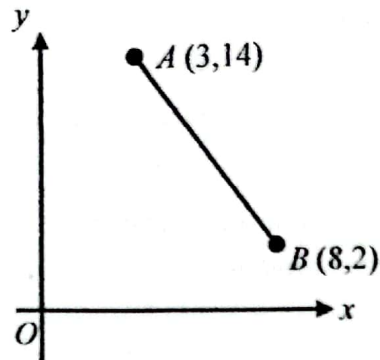
Antara berikut, yang manakah merupakan antejadian bagi implikasi di atas?

Which of the following is the antecedent for the implication above?

- A $x \neq 4$
- B $x = 4$
- C $4x + 5 = 21$
- D $4x + 5 \neq 21$

SULIT

- 36 Rajah 13 menunjukkan garis lurus AB pada suatu satah Cartes
Diagram 13 shows a straight line AB on a Cartesian plane.



Rajah 13
 Diagram 13

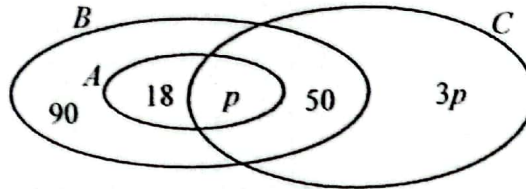
Hitung jarak AB .

Calculate the distance AB .

- A 5 unit
 B 10 unit
 C 12 unit
 D 13 unit
- 37 Diberi set $P = \{x: x \text{ ialah faktor bagi } 14\}$ dan set $Q = \{x: x \text{ ialah nombor perdana kurang daripada } 10\}$. Senaraikan semua unsur bagi $P \cap Q$.
*Given set $P = \{x: x \text{ is a factor of } 14\}$ and set $Q = \{x: x \text{ is prime numbers less than } 10\}$.
 List all the elements of $P \cap Q$.*
- A $\{2, 7\}$
 B $\{1, 2, 7\}$
 C $\{2, 4, 7\}$
 D $\{2, 3, 6\}$

- 38 Rajah 14 menunjukkan gambar rajah Venn yang mewakili bilangan ahli bagi tiga kelab sukan.
 $A = \{\text{Ahli-ahli Kelab Badminton}\}$, $B = \{\text{Ahli-ahli Kelab Bola Tampar}\}$ dan
 $C = \{\text{Ahli-ahli Kelab Tennis}\}$.

Diagram 14 shows a Venn diagram representing the number of members of the three sports clubs.
 $A = \{\text{Badminton club members}\}$, $B = \{\text{Volleyball club members}\}$ and
 $C = \{\text{Tennis club members}\}$.



Rajah 14
 Diagram 14

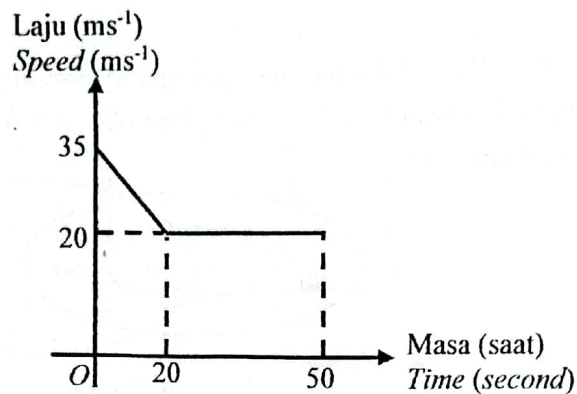
Diberi bahawa bilangan ahli kelab badminton adalah $\frac{1}{3}$ daripada bilangan ahli kelab bola tampar.
 Hitung bilangan ahli kelab tennis sahaja.

Given that the number of badminton club members is $\frac{1}{3}$ of the number of volleyball club members.

Calculate the number of tennis club members only.

- A 52
 B 78
 C 104
 D 156

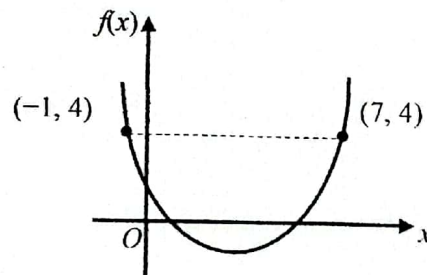
- 39 Rajah 15 menunjukkan graf laju-masa bagi gerakan sebuah motosikal untuk tempoh 50 saat.
Diagram 15 shows the speed-time graph the motion of a motorcycle for a period of 50 seconds.



Rajah 15
Diagram 15

Hitung jarak dalam m, pada 20 saat yang pertama.
Calculate the motion in m for the first 20 seconds.

- A 150
B 400
C 550
D 600
- 40 Rajah 16 menunjukkan graf bagi satu fungsi kuadratik.
Diagram 16 shows a graph for a quadratic function.



Rajah 16
Diagram 16

Nyatakan persamaan paksi simetri bagi graf fungsi kuadratik tersebut.
State the axis of symmetry of equation for graph quadratic function.

- A $x = 3$
B $x = 4$
C $y = 3$
D $y = 4$

KERTAS SOALAN TAMAT
END OF THE QUESTION PAPER