

NAMA :

KELAS :

Matematik
Kertas 1 (1449/1)
Julai 2026

PEPERIKSAAN PERCUBAAN SPM TAHUN 2026

MATEMATIK TINGKATAN 5

Kertas 1
1 jam 30 minit

MAKLUMAT UNTUK CALON
INFORMATION FOR CANDIDATES

1. Kertas peperiksaan ini mengandungi **40** soalan.
*This question paper consists of **40** questions.*
2. Jawab **semua** soalan.
*Answer **all** questions.*
3. Jawab setiap soalan dengan menghitamkan ruangan yang betul pada kertas jawapan objektif.
Answer each question by blackening the correct space on the objective answer sheet.
4. Hitamkan **satu** ruangan sahaja bagi setiap soalan.
*Blacken only **one** space for each question.*
5. Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.
The diagrams in the questions provided are not drawn to scale unless stated.
6. Satu senarai rumus disediakan di halaman 2 hingga 4.
A list of formulae is provided on pages 2 to 4.

Kertas peperiksaan ini mengandungi 20 halaman bercetak

NOMBOR DAN OPERASI NUMBER AND OPERATIONS

- | | |
|--|--|
| <p>1 $a^m \times a^n = a^{m+n}$</p> <p>3 $(a^m)^n = a^{mn}$</p> <p>5 $a^{\frac{m}{n}} = (a^m)^{\frac{1}{n}} = \left(a^{\frac{1}{n}}\right)^m$</p> <p>7 Faedah mudah / <i>Simple interest</i>,
$I = Prt$</p> <p>9 Jumlah bayaran balik / <i>Total repayment</i>, $A = P + Prt$</p> <p>10 $\text{Premium} = \frac{\text{Nilai muka polisi}}{\text{RMx}} \times (\text{Kadar premium per RMx})$
 $\text{Premium} = \frac{\text{Face value of policy}}{\text{RMx}} \times (\text{Premium rate per RMx})$</p> <p>11 Jumlah insurans yang harus dibeli = $\left(\frac{\text{Peratusan}}{\text{ko} - \text{insurans}}\right) \times \left(\frac{\text{Nilai boleh}}{\text{insurans harta}}\right)$
 <i>Amount of required insurance</i> = $\left(\frac{\text{Percentage of}}{\text{co} - \text{insurance}}\right) \times \left(\frac{\text{Insurable value}}{\text{of property}}\right)$</p> | <p>2 $a^m \div a^n = a^{m-n}$</p> <p>4 $a^{\frac{1}{n}} = \sqrt[n]{a}$</p> <p>6 $a^{\frac{m}{n}} = \sqrt[n]{a^m} = \left(\sqrt[n]{a}\right)^m$</p> <p>8 Nilai matang / <i>Maturity value</i>,
$MV = P \left(1 + \frac{r}{n}\right)^{nt}$</p> |
|--|--|

PERKAITAN DAN ALGEBRA RELATIONSHIP AND ALGEBRA

- | | |
|---|---|
| <p>1 Jarak / <i>Distance</i>
 $= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$</p> <p>3 Laju purata = $\frac{\text{Jumlah jarak}}{\text{Jumlah masa}}$
 <i>Average speed</i> = $\frac{\text{Total distance}}{\text{Total time}}$</p> <p>5 $A^{-1} = \frac{1}{ad - bc} \begin{pmatrix} d & -b \\ -c & a \end{pmatrix}$</p> | <p>2 Titik tengah / <i>Midpoint</i>,
 $(x, y) = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$</p> <p>4 $m = \frac{y_2 - y_1}{x_2 - x_1}$</p> <p>6 $m = -\frac{\text{pintasan} - y}{\text{pintasan} - x}$
 $m = -\frac{y - \text{intercept}}{x - \text{intercept}}$</p> |
|---|---|

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 = πr^2
Area of circle = πr^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 = $\frac{1}{2} \times$ hasil darab panjang dua pepenjuru
Area of kite = $\frac{1}{2} \times$ product of the length of two diagonals
- 8 Luas trapezium = $\frac{1}{2} \times$ hasil tambah dua sisi selari $\times$ tinggi
Area of trapezium = $\frac{1}{2} \times$ 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 = $\pi r^2 h$
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 $P(A') = 1 - P(A)$

Jawab **semua** soalan.

Answer **all** questions.

- 1** Bundarkan 50.08 kepada 2 angka bererti.
Round off 50.08 to 2 significant figures.
- | | | | |
|----------|------|----------|-------|
| A | 50 | C | 50.1 |
| B | 50.0 | D | 50.00 |
- 2** Diberi $341_5 + k_5 = 1202_5$. Cari nilai k .
Given $341_5 + k_5 = 1202_5$. Find the value of k .
- | | | | |
|----------|---------|----------|---------|
| A | 211_5 | C | 311_5 |
| B | 301_5 | D | 411_5 |
- 3** Ameera ingin membeli sebuah e-buku tentang pengurusan kewangan melalui sebuah aplikasi. Harga asal e-buku tersebut ialah RM45. Sebagai pengguna setia, Ameera mempunyai kod promo yang memberikan diskaun sebanyak 20%. Hitung jumlah wang, dalam RM, yang perlu dibayar oleh Ameera, dalam asas 3.
Ameera wants to buy a financial management e-book through an online application. The original price of the e-book is RM45. As a loyal user, Ameera has a promo code that gives her a 20% discount. Calculate the total amount, in RM, that Ameera has to pay, in base 3.
- | | | | |
|----------|---------|----------|----------|
| A | 102_3 | C | 1100_3 |
| B | 210_3 | D | 1200_3 |
- 4** Antara berikut, manakah merupakan suatu pernyataan ?
Which of the following is a statement ?
- | | |
|----------|--|
| A | Gunakan kata laluan yang kuat untuk keselamatan akaun media sosial anda.
<i>Use a strong password for your social media account security.</i> |
| B | Semua kecerdasan buatan (AI) memerlukan sambungan internet untuk berfungsi.
<i>All artificial intelligence (AI) require an internet connection to function.</i> |
| C | $7x - 4 > 10$ |
| D | Adakah anda sudah menebus kredit e-Belia tahun ini ?
<i>Have you redeemed your e-Belia credit this year ?</i> |

- 5** Berikut merupakan satu jujukan mata ganjaran yang dikumpul oleh Afiq setiap kali dia menyelesaikan tugas harian dalam sebuah aplikasi permainan video pada April 2026.

The following is a sequence of loyalty points collected by Afiq each time he completes a daily task in a video game application in April 2026.

39	,	48	,	57	,	x	,	y
----	---	----	---	----	---	-----	---	-----

Antara berikut, manakah merupakan nilai x dan y ?

Which of the following are the values of x and y ?

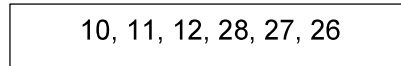
- | | | | |
|----------|------------------|----------|------------------|
| A | $x = 64, y = 74$ | C | $x = 66, y = 72$ |
| B | $x = 65, y = 74$ | D | $x = 66, y = 75$ |
- 6** Sebuah tiang bendera setinggi 15 m menghasilkan bayang-bayang sepanjang 20 m di atas permukaan tanah yang rata. Hitung nilai $\sin \theta$, dengan keadaan θ ialah sudut dongakan dari hujung bayang-bayang ke puncak tiang bendera.
A flagpole of height 15 m casts a shadow of length 20 m. Find the value of $\sin \theta$, where θ is the angle of elevation from the tip of the shadow to the top of the flagpole.

- | | | | |
|----------|---------------|----------|---------------|
| A | $\frac{3}{5}$ | C | $\frac{4}{5}$ |
| B | $\frac{3}{4}$ | D | $\frac{5}{4}$ |

- 7** Diberi $64 = 4^x$, nyatakan nilai x .
Given $64 = 4^x$, state the value of x .

- | | | | |
|----------|---|----------|---|
| A | 2 | C | 4 |
| B | 3 | D | 5 |

- 8 Rajah 1 menunjukkan satu set data.
Diagram 1 shows a set of data.

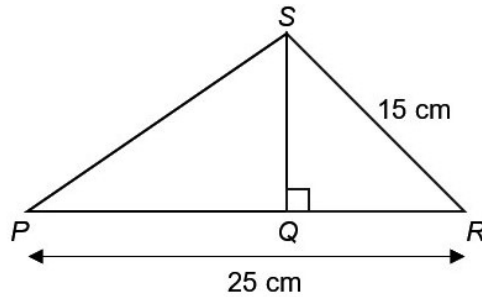


Rajah 1 / Diagram 1

Hitung julat bagi set data itu.
Calculate the range of the set of data.

- | | | | |
|----------|----|----------|----|
| A | 10 | C | 16 |
| B | 12 | D | 18 |

- 9 Rajah 2 menunjukkan sebuah segi tiga *SPR*.
Diagram 2 shows a triangle SPR.



Rajah 2 / Diagram 2

Diberi $\frac{QR}{QS} = \frac{3}{4}$, cari panjang, dalam cm, *PS*.

Given $\frac{QR}{QS} = \frac{3}{4}$, find the length, in cm, of *PS*.

- | | | | |
|----------|----|----------|----|
| A | 9 | C | 20 |
| B | 12 | D | 25 |

- 10 Berdasarkan matriks $F = \begin{bmatrix} -3 & 2 & 0 \\ 5 & -1 & 16 \\ 9 & 1 & 8 \end{bmatrix}$, kenal pasti unsur f_{32} .

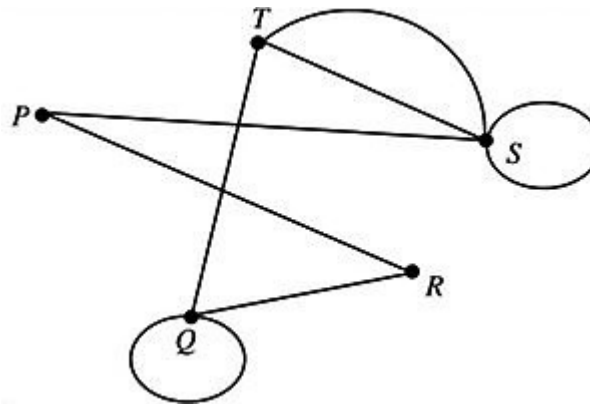
Based on matrix $F = \begin{bmatrix} -3 & 2 & 0 \\ 5 & -1 & 16 \\ 9 & 1 & 8 \end{bmatrix}$, identify the element f_{32} .

- | | | | |
|----------|----|----------|---|
| A | -1 | C | 2 |
| B | 5 | D | 1 |

- 11 Nyatakan faktor sepunya terbesar bagi 28, 42 dan 56.
State the highest common factor of 28, 42 and 56.

- | | | | |
|----------|----|----------|---|
| A | 14 | C | 7 |
| B | 12 | D | 4 |

- 12 Rajah 3 menunjukkan satu graf berbilang tepi dan gelung tak berarah.
Diagram 3 shows an undirected multigraph with loops.



Rajah 3 / Diagram 3

Tentukan bilangan tepi.
Determine the number of edges.

- | | | | |
|----------|---|----------|----|
| A | 4 | C | 8 |
| B | 6 | D | 12 |

- 13** Tentukan pasangan matriks yang memenuhi syarat untuk operasi penambahan dan penolakan matriks dilakukan.
Determine the pairs of matrices that satisfies the conditions for matrix addition and subtraction of matrices.

A $\begin{bmatrix} 10 \\ -5 \end{bmatrix}$ dan / and $\begin{bmatrix} 3 & 7 \\ 16 & 1 \end{bmatrix}$

B $\begin{bmatrix} 2 & -5 & 3 \\ 12 & 8 & 7 \end{bmatrix}$ dan / and $\begin{bmatrix} 3 & 9 \\ 1 & -7 \end{bmatrix}$

C $\begin{bmatrix} 0 & -6 \end{bmatrix}$ dan / and $\begin{bmatrix} 8 & 12 \end{bmatrix}$

D $\begin{bmatrix} 9 & 7 \end{bmatrix}$ dan / and $\begin{bmatrix} -4 \\ 11 \end{bmatrix}$

14 $\begin{bmatrix} 3 & 5 \end{bmatrix} \begin{bmatrix} 2 \\ 4 \end{bmatrix} =$

A $\begin{bmatrix} 15 \end{bmatrix}$

C $\begin{bmatrix} 25 \end{bmatrix}$

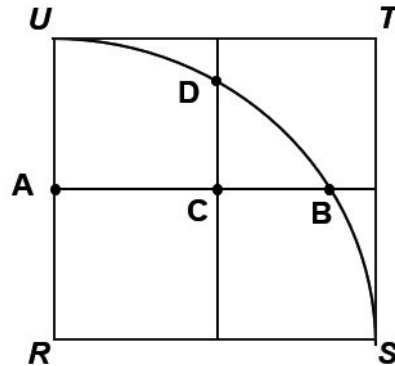
B $\begin{bmatrix} 16 \end{bmatrix}$

D $\begin{bmatrix} 26 \end{bmatrix}$

- 15** Apakah kepentingan membayar hutang dalam tempoh yang ditetapkan oleh bank ?
What is the importance of paying debts within the period set by the bank ?

- A** Untuk meningkatkan had kredit
To increase the credit limit
- B** Untuk menikmati tempoh tanpa faedah
To enjoy an interest-free period
- C** Untuk menambah jumlah hutang
To increase the amount of debt
- D** Untuk mengelakkan penggunaan kad kredit
To avoid using a credit card

- 16 Rajah 4 menunjukkan sebuah segi empat sama $TURS$ dengan panjang sisi 3 cm.
Diagram 4 shows a square $TURS$ with side length 3 cm.

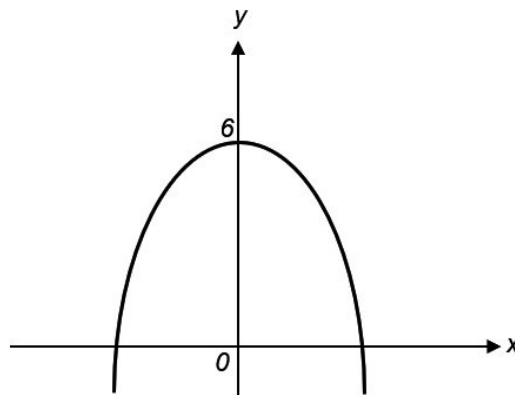


Rajah 4 / Diagram 4

Titik X bergerak di dalam segi empat sama $TURS$ dengan keadaan jaraknya dari R ialah 3 cm. Manakala, titik Y bergerak di dalam segi empat $TURS$ itu dengan keadaan jarak-jaraknya dari R dan S adalah sentiasa sama. Antara titik-titik A , B , C dan D , yang manakah ialah titik persilangan bagi lokus X dan lokus Y ?

Point X moves inside the square $TURS$ such that its distance from R is 3 cm. While point Y moves inside the square $TURS$ such that its equidistant from R and S . Which of the point A , B , C and D is the intersection point of the locus X and locus Y ?

- 17 Rajah 5 menunjukkan satu graf fungsi kuadratik.
Diagram 5 shows a graph of quadratic function.



Rajah 5 / Diagram 5

Antara berikut, manakah persamaan yang mewakili graf di atas ?
Which of the following represents the equation of the graph ?

- A** $y = -x^2 + 6$
B $y = x^2 + 6$

- C** $y = x^3 + 6$
D $y = -x^3 + 6$

- 18 Permudahkan
Simplify

$$\frac{5}{m-2} \div \frac{15p}{2m-4}$$

A $-\frac{2}{3p}$

C $-\frac{3}{2p}$

B $\frac{2}{3p}$

D $\frac{3}{2p}$

- 19 Diberi $5x = 6y + 2z$, hitung nilai x apabila $y = 4$ dan $z = -2$.
Given $5x = 6y + 2z$, calculate the value of x when $y = 4$ and $z = -2$.

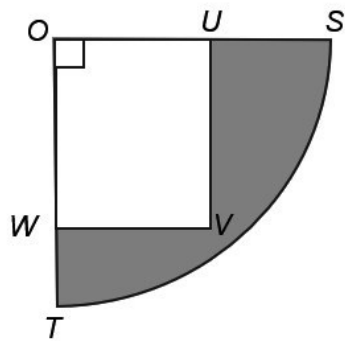
A 4

C 5.6

B 4.8

D 15

- 20 Rajah 6 menunjukkan sukuan OTS berpusat O . $OWVU$ ialah sebuah segi empat tepat. Diberi $OS = 10$ cm, $OW = 8$ cm dan $US = 4$ cm.
Diagram 6 shows a quadrant OTS with centre O . $OWVU$ is a rectangle. Given $OS = 10$ cm, $OW = 8$ cm and $US = 4$ cm.



Rajah 6 / Diagram 6

Hitung luas, dalam cm^2 , kawasan yang berlorek.
Calculate the area, in cm^2 , of the shaded region.

A $25\pi - 12$

C $25\pi - 48$

B $100\pi - 12$

D $100\pi - 48$

- 21** Diberi bahawa garis lurus $6x + 9y = 27$ adalah selari dengan garis lurus $3x + ky = 18$. Hitung nilai k .

Given that straight line $6x + 9y = 27$ is parallel to straight line $3x + ky = 18$. Calculate the value of k .

- | | | | |
|----------|---------------|----------|----------------|
| A | 6 | C | -6 |
| B | $\frac{9}{2}$ | D | $-\frac{9}{2}$ |

- 22** S berubah secara langsung dengan T . Diberi $S = 3$ apabila $T = 2$. Hitung nilai T apabila $S = 4$.

S varies directly with T . Given $S = 3$ when $T = 2$. Calculate the value of T when $S = 4$.

- | | | | |
|----------|---------------|----------|---------------|
| A | $\frac{8}{5}$ | C | $\frac{6}{5}$ |
| B | $\frac{7}{5}$ | D | $\frac{8}{3}$ |

- 23** Diberi P berubah secara langsung dengan kuasa tiga Q dan secara songsang dengan punca kuasa dua R . Cari hubungan antara P , Q dan R .

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

- | | | | |
|----------|----------------------------------|----------|-------------------------------------|
| A | $P \propto \frac{\sqrt{Q}}{R^3}$ | C | $P \propto \frac{\sqrt[3]{Q}}{R^3}$ |
| B | $P \propto \frac{Q^2}{R^2}$ | D | $P \propto \frac{Q^3}{\sqrt{R}}$ |

- 24** Plot batang-dan-daun menunjukkan bil air bulanan bagi beberapa buah rumah di suatu kawasan perumahan.
The stem-and-leaf plot shows the monthly water bill of a few houses in a certain housing area.

Batang Stem	Daun Leaf
1	0 2 4
2	1 2 3 4 5
3	2 3 4 5 7 8
4	3 4 5 6 7 9
5	1 2 4 8
6	0 2 3 5 8 8

Kekunci : 2 | 1 bermaksud RM21

Key : 2 | 1 means RM21

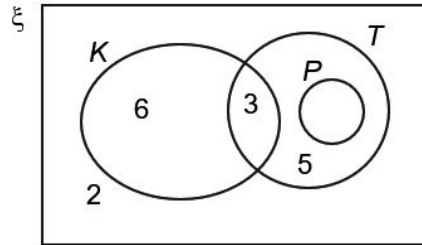
Hitung peratusan bilangan rumah yang dikenakan bil air kurang daripada RM47.
Calculate the percentage of number of houses that has water bill less than RM47.

- | | | | |
|----------|-----|----------|-----|
| A | 50% | C | 70% |
| B | 60% | D | 80% |

- 25** Diberi $\xi = \{x : x \text{ ialah integer, } 1 < x \leq 12\}$, set $A = \{x : x \text{ ialah gandaan } 4\}$, set $B = \{x : x \text{ ialah suatu nombor kuasa dua sempurna}\}$. Nyatakan semua unsur bagi set $A \cup B$.
It is given that $\xi = \{x : x \text{ is an integer, } 1 < x \leq 12\}$, set $A = \{x : x \text{ is a multiple of } 4\}$, set $B = \{x : x \text{ is a perfect square}\}$. State all the elements of set $A \cup B$.

- | | | | |
|----------|----------------------|----------|----------------------|
| A | $\{4, 8, 9, 12\}$ | C | $\{1, 4, 8, 9, 12\}$ |
| B | $\{2, 4, 8, 9, 12\}$ | D | $\{4\}$ |

- 26** Rajah 7 menunjukkan set semesta, ξ , set K , set P dan set T dengan bilangan unsur yang tidak lengkap.
Diagram 7 shows universal set, ξ , set K , set P and set T with incomplete number of elements.



Rajah 7 / Diagram 7

Diberi $n(K') = n(T')$, cari $n(P)$.
 Given $n(K') = n(T')$, find $n(P)$.

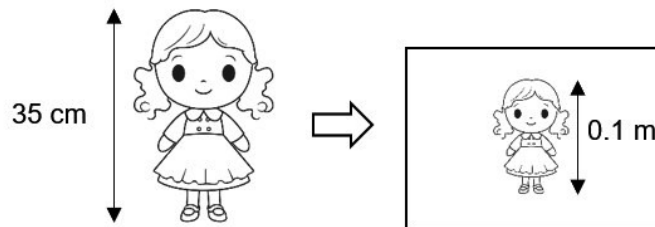
- | | |
|---|---|
| <p>A 1</p> <p>B 2</p> | <p>C 3</p> <p>D 7</p> |
|---|---|
- 27** Arifah mempunyai sebuah kedai di Kuala Lumpur. Dianggarkan sewa bulanan kedainya sebanyak RM8 000 dengan kadar cukai taksiran sebanyak 9%. Kirakan cukai taksiran harta yang perlu dibayar oleh Arifah bagi setiap setengah tahun.
Arifah owns a shophouse in Kuala Lumpur. It is given that estimated monthly rental is RM8 000 and the property assessment tax is 9%. Calculate the property assessment tax payable by Arifah for every half-year.
- | | |
|---|---|
| <p>A RM8 640</p> <p>B RM4 320</p> | <p>C RM720</p> <p>D RM360</p> |
|---|---|
- 28** Di atas sebuah meja terdapat 7 gelas jus oren dan 10 gelas jus tembikai. Nina dan Lyra memilih minuman mereka masing-masing secara rawak dari meja itu. Cari kebarangkalian bahawa kedua-dua gelas yang dipilih ialah jus tembikai. Bundarkan jawapan anda kepada 2 tempat perpuluhan.
On a table, there are 7 glasses of orange juice and 10 glasses of watermelon juice. Nina and Lyra choose their drinks respectively at random from the table. Find the probability that both glasses chosen are watermelon juice. Round off your answer to two decimal places.
- | | |
|---|---|
| <p>A 0.31</p> <p>B 0.33</p> | <p>C 0.35</p> <p>D 0.59</p> |
|---|---|

- 29 Antara berikut, yang manakah benar mengenai cukai perkhidmatan di Malaysia.
Which of the following are true about service tax in Malaysia.

- I Kadar cukai perkhidmatan yang dikenakan ke atas perkhidmatan serta pembekalan makanan dan minuman adalah 6% di bawah Akta Cukai Jualan 2018.
The service tax rate imposed on food and beverage services is 6% under Sales Tax Act 2018.
- II Cukai Perkhidmatan mula dikuatkuasakan pada 1 September 2018.
Service Tax reinforced on 1 September 2018.
- III Cukai Perkhidmatan dikutip oleh Lembaga Hasil Dalam Negeri, LHDN.
The Sales and Service Tax is collected by Inland Revenue Board, (IRB).
- IV Pembekal perkhidmatan penyediaan makanan dan minuman dengan nilai perkhidmatan bercukai yang disediakan melebihi nilai ambang RM1 500 000 setahun, perlu didaftarkan bawah Akta Cukai Perkhidmatan 2018.
The food and beverage service providers with value of taxable services exceeding threshold of RM1 500 000 per annum, shall register under Service Tax Act 2018.

- | | | | |
|----------|---------------------|----------|----------------------|
| A | I, II dan I and IV | C | II, III dan I and IV |
| B | I, III dan I and IV | D | II dan I and IV |

- 30 Ellie melukis gambar anak patungnya di atas kertas lukisan seperti yang ditunjukkan dalam Rajah 8 menggunakan skala 1 : n .
Ellie draws her doll on the drawing paper as shown in Diagram 8 using a scale of 1 : n .

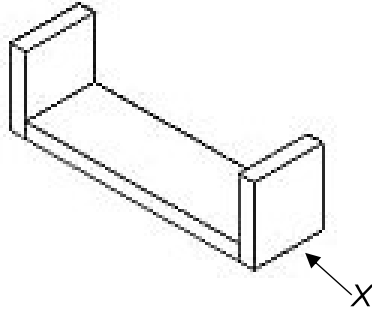


Rajah 8 / Diagram 8

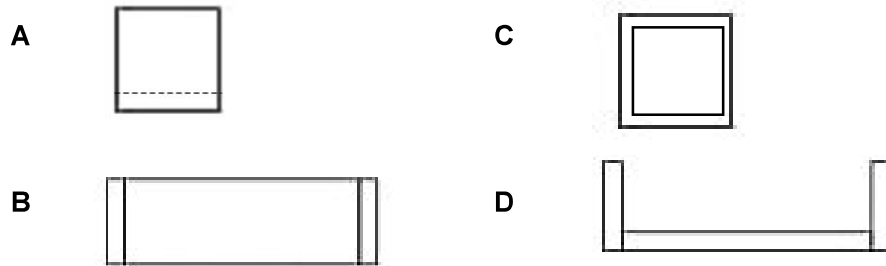
Cari nilai n .
Find the value of n .

- | | | | |
|----------|---------------|----------|---------------|
| A | $\frac{2}{7}$ | C | $\frac{5}{2}$ |
| B | $\frac{2}{5}$ | D | $\frac{7}{2}$ |

- 31 Antara berikut, manakah unjuran ortogon bagi objek dalam Rajah 9 pada satah mencancang sebagaimana dilihat dari X ?
Which of the following is the orthogonal projection of the object in Diagram 9 on the vertical plane as viewed from X ?



Rajah 9 / Diagram 9



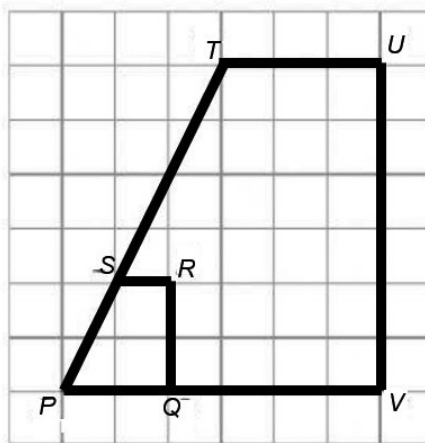
- 32 Antara berikut, manakah **bukan** salah satu proses dalam pengurusan kewangan yang berkesan ?
*Which of the following is **not** one of the process in an effective financial management ?*

- A Menetapkan matlamat kewangan.
Setting financial goals.
- B Melaksanakan pelan kewangan.
Creating financial plan.
- C Mengumpul dan menganalisis data kewangan.
Collecting and analysing the financial data.
- D Mengkaji semula dan menyemak kemajuan kewangan.
Assessing and reviewing the financial progress.

- 33** Lim membeli dua jenis buku latihan daripada Kedai Buku Pintar. Buku latihan sains, s berharga RM4.70 sebuah dan buku latihan matematik, m berharga RM5.00 sebuah. Peruntukan kewangan untuk membeli buku latihan tersebut adalah sebanyak RM250. Nyatakan ketaksamaan linear yang memenuhi syarat tersebut.
Lim bought two types of exercise books from Kedai Buku Pintar. The science exercise book, s costs RM4.70 each and the mathematics exercise book, m costs RM5.00 each. The budget for buying these exercise books is RM250. State the linear inequality that satisfies this condition.

- A** $4.7s + 5m < 250$ **C** $4.7s + 5m \geq 250$
B $4.7s + 5m \leq 250$ **D** $4.7s + 5m > 250$

- 34** Rajah 10 menunjukkan trapezium $RSPQ$ adalah imej bagi trapezium $UTPV$ di bawah suatu pembesaran.
Diagram 10 shows trapezium $RSPQ$ is the image of trapezium $UTPV$ under an enlargement.

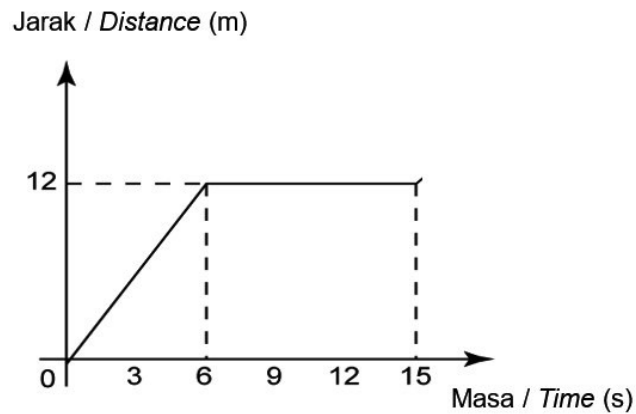


Rajah 10 / Diagram 10

Cari pusat dan faktor skala bagi pembesaran itu.
Find the centre and scale factor of the enlargement.

	Pusat pembesaran <i>Centre of enlargement</i>	Faktor skala <i>Scale factor</i>
A	P	3
B	R	3
C	R	$\frac{1}{3}$
D	P	$\frac{1}{3}$

- 35 Rajah 11 menunjukkan graf jarak-masa gerakan suatu zarah selama 15 saat.
Diagram 11 shows the motion of a particle for a period of 15 seconds.



Rajah 11 / Diagram 11

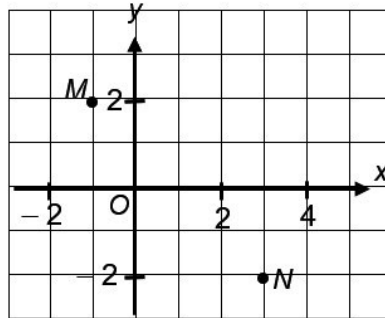
Tentukan laju, dalam ms^{-1} , pergerakan zarah tersebut dalam tempoh 3 saat pertama.

Determine the speed, in ms^{-1} , of the particle during the first 3 seconds.

- | | | | |
|----------|-----|----------|---|
| A | 0 | C | 1 |
| B | 0.5 | D | 2 |
- 36 Risiko yang dilindungi oleh insurans hayat adalah seperti di bawah, **kecuali**
*The risks covered by life insurance are as follows, **except***
- | | | | |
|----------|-------------------|----------|-----------|
| A | Keilatan | C | Kebakaran |
| B | Penyakit kritikal | D | Kematian |
- 37 Diberi bahawa $\tan \theta = 0.7391$ dan $0^\circ \leq \theta \leq 360^\circ$, hitung sudut θ .
Given that $\tan \theta = 0.7391$ and $0^\circ \leq \theta \leq 360^\circ$, calculate the angle θ .

- | | | | |
|----------|--------------------------------------|----------|--------------------------------------|
| A | 36.5° atau / or 216.5° | C | 36.4° atau / or 216.4° |
| B | 36.5° atau / or 233.5° | D | 36.4° atau / or 233.6° |

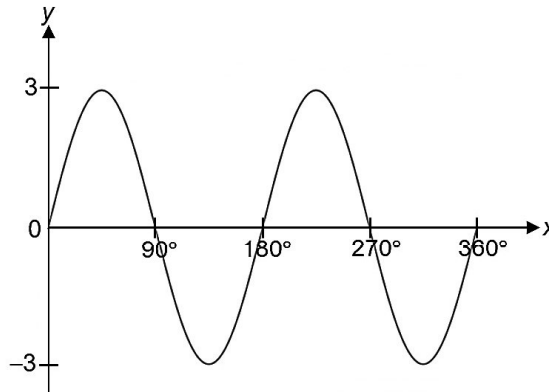
- 38 Rajah 12 menunjukkan dua titik M dan N pada satu satah Cartes.
Diagram 12 shows two points M and N on a Cartesian plane.



Rajah 12 / Diagram 12

Hitung jarak di antara titik M dan titik N .
Calculate the distance between point M and point N .

- | | | | |
|----------|------|----------|------|
| A | 3.46 | C | 5.66 |
| B | 4.47 | D | 6.47 |
- 39 Rajah 13 menunjukkan suatu graf sinus dengan $y = q \sin px^\circ$, $0^\circ \leq x^\circ \leq 360^\circ$.
Diagram 13 shows a sinus graph with $y = q \sin px^\circ$, $0^\circ \leq x^\circ \leq 360^\circ$.



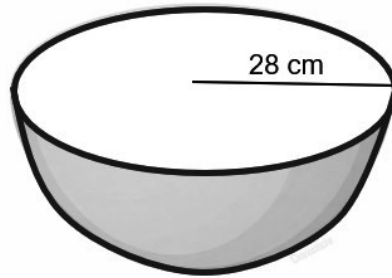
Rajah 13 / Diagram 13

Diberi p dan q adalah pemalar, cari nilai p dan nilai q .
Given that p and q are constants, find the value of p and value of q .

- | | | | |
|----------|----------------|----------|------------------|
| A | $p = 3, q = 2$ | C | $p = -2, q = -3$ |
| B | $p = 2, q = 3$ | D | $p = -3, q = -2$ |

- 40 Rajah 14 menunjukkan sebuah mangkuk berbentuk hemisfera yang diisi dengan adunan kek.

Diagram 14 shows a hemisphere bowl filled of cake mixture.



Rajah 14 / Diagram 14

Adunan itu kemudiannya dituang ke dalam acuan berbentuk silinder yang berjari 21 cm untuk menghasilkan 2 biji kek. Jika tinggi sebiji kek itu ialah 14 cm, hitung isipadu, dalam cm^3 , adunan yang tinggal.

The mixture is then poured into a cylindrical mould with a radius of 21 cm to produce a cake. The whole mixture can produce 2 cakes. If the height of a cake is 14 cm, calculate the volume, in cm^3 , of left over mixture.

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

A 7 185.55

C 7 186.66

B 7 185.57

D 7 186.67