



TINGKATAN 5

1449/1

MATEMATIK

PEPERIKSAAN PERCUBAAN SPM 2022

**Kertas 1 November
2022**

SMK CONVENT TAIPING

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

Satu jam tiga puluh minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

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 22 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 Faedah mudah / <i>Simple interest</i> , $I = Prt$ | |
| 6 Faedah kompaun / <i>Compound interest</i> , $MV = P \left(1 + \frac{r}{n} \right)^m$ | |
| 7 Jumlah bayaran balik / <i>Total repayment</i> , $A = P + Prt$ | |

PERKAITAN DAN ALGEBRA RELATIONSHIP AND ALGEBRA

- | | |
|---|--|
| 1 Jarak/ <i>Distance</i> = $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ | |
| 2 Titik tengah/ <i>Midpoint</i> , $(x, y) = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$ | |
| 3 Laju purata = $\frac{\text{Jumlah jarak}}{\text{Jumlah masa}}$

$\text{Average speed} = \frac{\text{Total distance}}{\text{Total time}}$ | |
| 4 $m = \frac{y_2 - y_1}{x_2 - x_1}$ | |
| 5 $m = -\frac{\text{pintasan} - y}{\text{pintasan} - x}$

$m = -\frac{y - \text{intercept}}{x - \text{intercept}}$ | |
| 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 $= \pi d = 2\pi j$
Circumference of circle $= \pi d = 2\pi r$
- 4 Luas bulatan $= \pi j^2$
Area of circle $= \pi r^2$
- 5 $\frac{\text{Panjang lengkok}}{2\pi j} = \frac{\theta}{360^\circ}$
 $\frac{\text{Arc length}}{2\pi r} = \frac{\theta}{360^\circ}$
- 6 $\frac{\text{luas sektor}}{\pi j^2} = \frac{\theta}{360^\circ}$
 $\frac{\text{Area of sector}}{\pi r^2} = \frac{\theta}{360^\circ}$
- 7 Luas layang = $\frac{1}{2} \times$ hasil darab panjang dua pepenjuru
Area of kite $= \frac{1}{2} \times \text{product of two diagonals}$
- 8 Luas trapezium = $\frac{1}{2} \times$ hasil tambah dua sisi selari $\times$ tinggi
Area of trapezium $= \frac{1}{2} \times \text{sum of two parallel sides} \times \text{height}$
- 9 Luas permukaan silinder $= 2\pi j^2 + 2\pi jt$
Surface area of cylinder $= 2\pi r^2 + 2\pi rh$
- 10 Luas permukaan kon $= \pi j^2 + \pi js$
Surface area of cone $= \pi r^2 + \pi rs$
- 11 Luas permukaan sfera $= 4\pi j^2$
Surface area of sphere $= 4\pi r^2$
- 12 Isi padu prisma = luas keratan rentas $\times$ tinggi
Volume of prism $= \text{area of cross section} \times \text{height}$
- 13 Isi padu silinder $= \pi j^2 t$
Volume of cylinder $= \pi r^2 h$

- 14 Isi padu kon = $\frac{1}{3}\pi j^2t$
 Volume of cone = $\frac{1}{3}\pi r^2h$
- 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, $\sigma = \frac{\sum (x - \bar{x})^2}{N} = \frac{\sum x^2}{N} - \bar{x}^2$
- 4 Varians / Variance, $\sigma = \frac{\sum f(x - \bar{x})^2}{\sum f} = \frac{\sum fx^2}{\sum f} - \bar{x}^2$
- 5 isihan piawai / Standard deviation, $\sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{N}} = \sqrt{\frac{\sum x^2}{N} - \bar{x}^2}$
- 6 isihan 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 $P(A) = \frac{(A)}{(S)}$
- 8 $P(A') = 1 - P(A)$

Jawab **semua** soalan*Answer all questions*

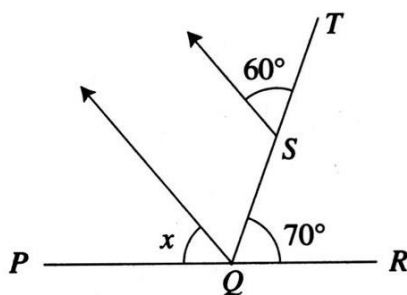
1. Cari nilai bagi :
Find the value of :

$$\left(1\frac{2}{3} \times 3\frac{6}{7}\right)^{-1}$$

A $\frac{45}{7}$
B $\frac{7}{45}$

C $4\frac{5}{7}$
D $7\frac{4}{5}$

2. Dalam Rajah 2, PQR dan QST ialah garis lurus.
In diagram 2, PQR and QST are straight lines.



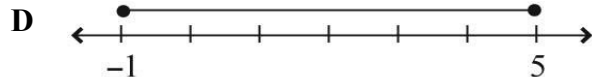
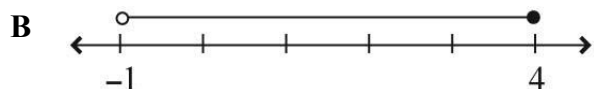
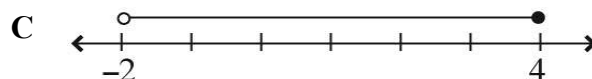
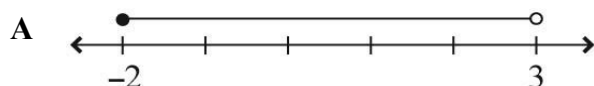
Rajah 2
Diagram 2

Cari nilai x .
Find the value of x .

A 50°
B 55°

C 60°
D 65°

3. Antara garis nombor yang berikut, manakah mewakili ketaksamaan linear $-7 \leq 4x + 1 < 13$?
Which of the following number lines represents the linear inequalities $-7 \leq 4x + 1 < 13$?



4. $5pq - 2(1 - pq) =$

A $3pq - 2$

B $4pq - 2$

C $6pq - 2$

D $7pq - 2$

5. Bentukkan persamaan linear dalam satu pemboleh ubah bagi pernyataan berikut:

Construct a linear equation in one variable for the following statement:

Siti membeli lima batang pen dengan harga y sen sebatang dan sebuah buku berharga RM5. Jumlah wang yang dibayarnya ialah RM 8

Siti bought five pens for y cent each and a book for RM 5. The amount she paid was RM 8.

A $5y + 500 = 800$

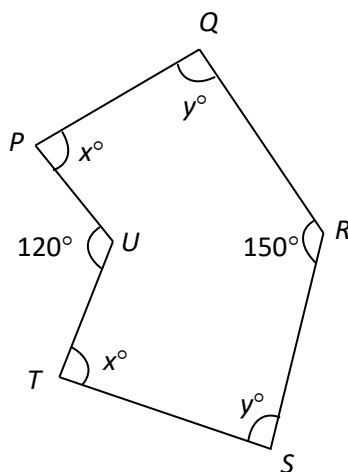
B $5y + 5 = 8$

C $5y + 800 = 500$

D $5y - 8 = 5$

6. Dalam Rajah 6, PQRSTU adalah heksagon.

In Diagram 6, PQRSTU is a hexagon.



Rajah 6
Diagram 6

Hitung nilai bagi $x^\circ + y^\circ$

Calculate the value $x^\circ + y^\circ$

A 135

B 165

C 195

D 330

7. $\frac{4}{x^2 - y^2} \div \frac{3x}{x + y} =$

A $\frac{12x}{x - y}$

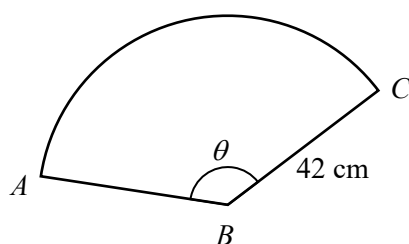
B $\frac{12x}{x + y}$

C $\frac{4}{3x - y}$

D $\frac{4}{3x(x - y)}$

8. Rajah 8 menunjukkan sektor bagi sebuah bulatan yang berjejari 42 cm.

Diagram 8 shows a sector of a circle with a radius of 42 cm.



Rajah 8

Diagram 8

Diberi panjang lengkok AC ialah 88 cm. Dengan menggunakan $\pi = \frac{22}{7}$, cari nilai θ .

Given the length of arc AC is 88 cm. By using $\pi = \frac{22}{7}$, find the value of θ .

A. 240

B. 200

C. 120

D. 80

9. Diberi bahawa $2rt - t = \frac{w}{3t}$ ungkapkan t dalam sebutan r dan w .

Given that $2rt - t = \frac{w}{3t}$, express t in terms of r and w .

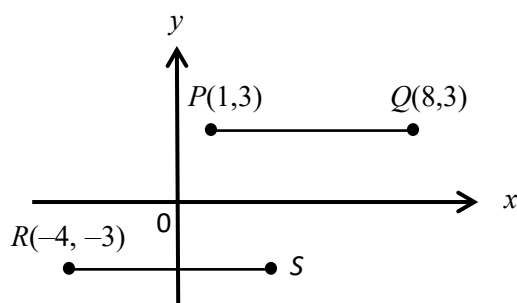
A $t = \sqrt{\frac{w}{6r - 3}}$

B $t = \sqrt{\frac{w}{6r - 1}}$

C $t = \sqrt{\frac{3w}{6r - 3}}$

D $t = \sqrt{\frac{3w}{6r - 1}}$

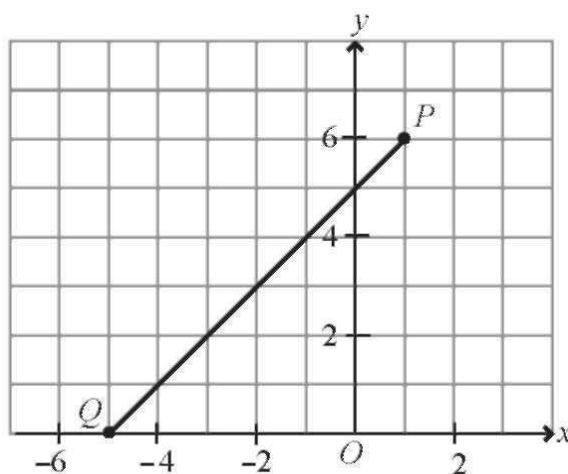
10. Rajah 10 menunjukkan garis lurus PQ dan RS , dilukis pada suatu satah Cartes.
Diagram 10 shows the straight line PQ and RS , drawn on a Cartesian plane.



Rajah 10
 Diagram 10

Diberi $PQ = RS$, cari koordinat titik S .
Given that $PQ = RS$, find the coordinates of point S .

- | | |
|-------------|------------|
| A. (11, -3) | C. (-3, 3) |
| B. (11, 3) | D. (3, -3) |
11. Rajah 11 menunjukkan garis lurus.
Diagram 11 shows a straight line.

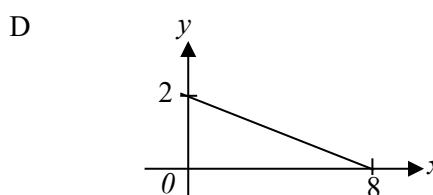
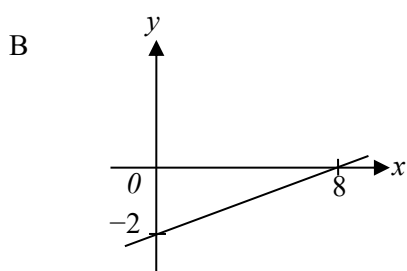
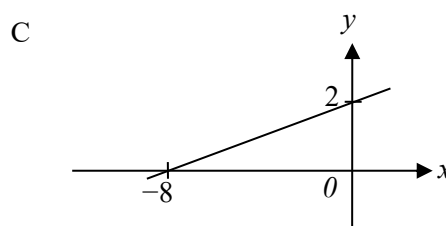
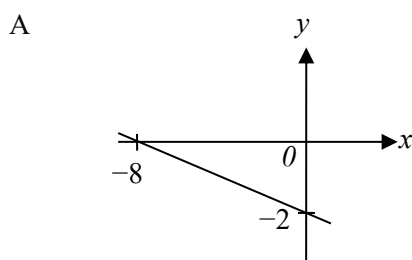


Rajah 11
 Diagram 11

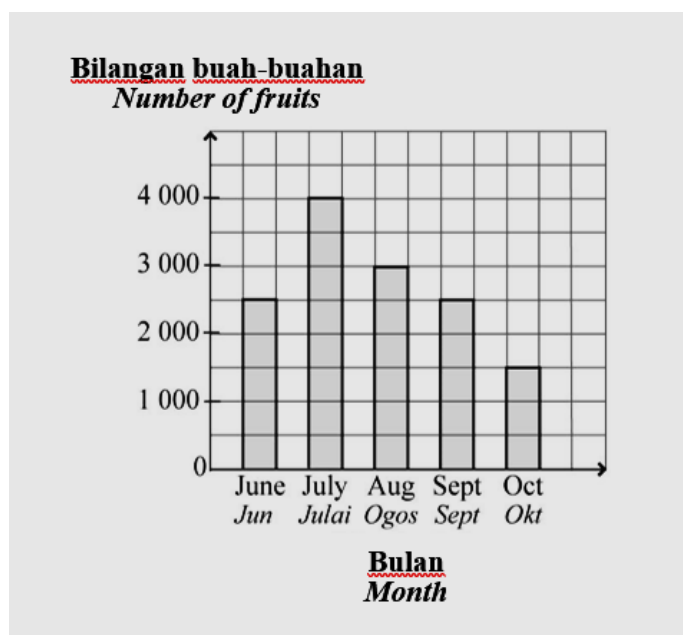
Kecerunan PQ ialah
The gradient of PQ is

- | | |
|-----|------------------|
| A 1 | C $-\frac{1}{9}$ |
| B 9 | D -1 |

- 12 Antara yang berikut, graf manakah yang mewakili $4y + x = 8$?
Which of the following graphs represents $4y + x = 8$?



13. Rajah 13 ialah sebuah carta palang yang menunjukkan bilangan buah-buahan yang dijual dalam lima bulan.
Diagram 13 is a bar chart showing the number of fruits sold in five months.



Rajah 13

Diagram 13

Cari min bagi buah-buahan yang telah dijual.
Find the mean of the fruits sold.

A 2 300

B 2 600

C 2 700

D 3 000

14. Saffiyah telah mencipta rekod baharu dalam acara 100 meter dalam Kejohanan Majlis Sukan Sekolah-Sekolah (MSSM) 2022 dengan catatan masa 10.63 s
Saffiyah had set a new record in the 100 metre at the Malaysian Schools Sports Council (MSSM) 2022 with a time of 10.63 s.

Hitung laju dalam km/j, lariannya.
Calculate the speed in km/h, of the run

- | | |
|---------|----------|
| A. 0.56 | C. 10.63 |
| B. 9.41 | D. 33.87 |

15. Jika $\cos \theta = 0.6$ dan $\tan \theta = \frac{4}{3}$, cari nilai bagi $\sin \theta$.

If $\cos \theta = 0.6$ and $\tan \theta = \frac{4}{3}$, find the value of $\sin \theta$.

- | | |
|-------|-------|
| A 0.4 | C 1.2 |
| B 0.8 | D 1.6 |

16. $9y^6 \div 27y^2 =$

- | | |
|--------------------|--------------------|
| A $\frac{1}{3}y^3$ | C $\frac{1}{9}y^3$ |
| B $\frac{1}{3}y^4$ | D $\frac{1}{9}y^4$ |

17. Encik Raju membeli 2 500 unit saham Syarikat Cekap Berhad pada harga RM 1.60 seunit. Pada akhir tahun, syarikat itu membayar dividen sebanyak 4% kepada semua pemegang saham syarikat. Pada tahun berikutnya, Encik Raju telah menjual semua sahamnya apabila harga saham meningkat kepada RM1.80 seunit. Berapakah nilai pulangan pelaburan bagi Encik Raju?

Mr Raju bought 2 500 share units of Syarikat Cekap Berhad at RM 1.60 per unit. At the end of the year, the company paid a dividend of 4 % to all of its shareholders. In the following year, Mr Raju sold all his shares when the share price rose to RM 1.80 per unit. What is the return of investment for Mr Raju?

- | | |
|----------|----------|
| A 11.5 % | C 15.1 % |
| B 12.5 % | D 16.5 % |

18. Jadual 18 di bawah menunjukkan bilangan ketidakhadiran 20 orang murid pada bulan September tahun 2022. Hitung varians bagi bilangan hari murid tidak hadir. *Table 18 below shows the number of absentees of 20 students in the September of 2022. Calculate the variance for the number of days students were absent.*

Bilangan hari/ <i>Number of day</i>	1	2	3	4	5
Bilangan murid/ <i>Number of students</i>	3	5	8	2	2

Jadual 18/ Table 18

- A** 2.75
B 1.13

- C** 1.29
D 1.75

19. Jadual 19 menunjukkan bilangan murid dari tiga kelas yang menghadiri suatu kem motivasi.

Table 19 shows the number of students from the three classes who attended a motivational camp.

	5P	5Q	5R
Lelaki <i>Boys</i>	10	21	15
Perempuan <i>Girls</i>	23	12	9

Jadual 19

Table 19

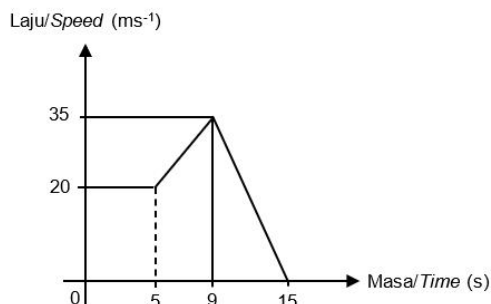
Seorang murid dipilih secara rawak dari kumpulan itu. Hitung kebarangkalian bahawa seorang murid dari kelas 5R terpilih.

One student was randomly selected from the group. Calculate the probability that a student from class 5R is selected.

- A** $\frac{1}{6}$
B $\frac{1}{10}$

- C** $\frac{4}{15}$
D $\frac{11}{30}$

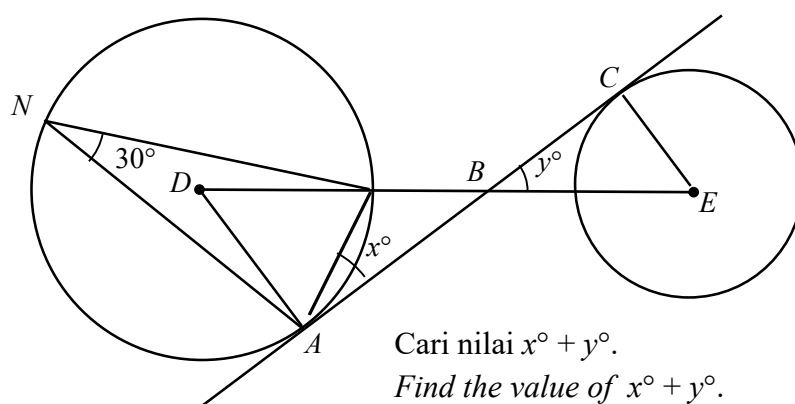
20. Rajah 20 menunjukkan graf laju-masa bagi pergerakan suatu zarah dalam tempoh 15 saat. *Diagram 20 shows a speed-time graph for the movement of a particle for a period of 15 seconds.*



Rajah 20
Diagram 20

Hitung jumlah jarak, dalam m, yang dilalui oleh zarah itu dalam 10 saat terakhir.
Calculate the total distance, in m, travelled by the particle in the last 10 seconds.

- A 452.5
B 450
C 347.5
D 215
21. Panjang sebenar sebuah jambatan ialah 8 km dan panjangnya pada sebuah peta ialah 2 cm. Cari skala yang digunakan.
The actual length of a bridge is 8 km and its length on a map is 2 cm. Find the scale used.
- A. 1 : 400 000
B. 1 : 40 000
C. 1 : 40
D. 1 : 4
22. Dalam Rajah 22, ABC ialah tangen sepunya kepada bulatan berpusat D dan E . DBE ialah garis lurus. AD dan CE ialah jejari bulatan.
In Diagram 22, ABC is a common tangent to the circles with centre D and E . DBE is a straight line. AD and CE is the radius of the circles.



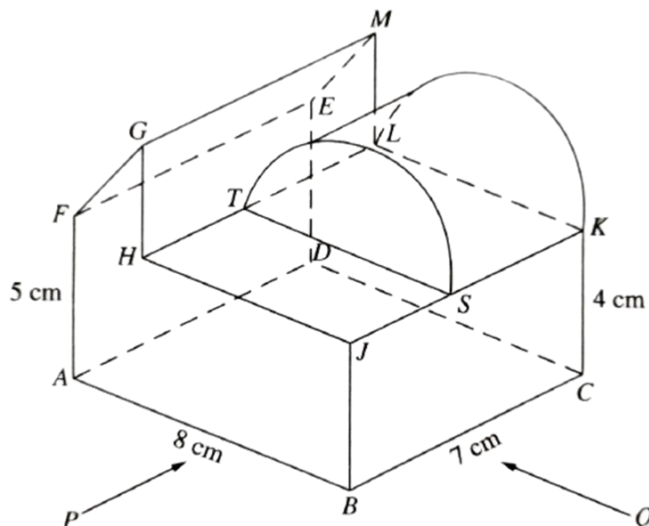
Rajah 22
Diagram 22

Cari nilai $x^\circ + y^\circ$.
Find the value of $x^\circ + y^\circ$.

- A 70°
B 60°
C 50°
D 30°

23. Rajah 23 menunjukkan sebuah gabungan pepejal. Antara berikut yang manakah adalah normal kepada plane $ABCD$.

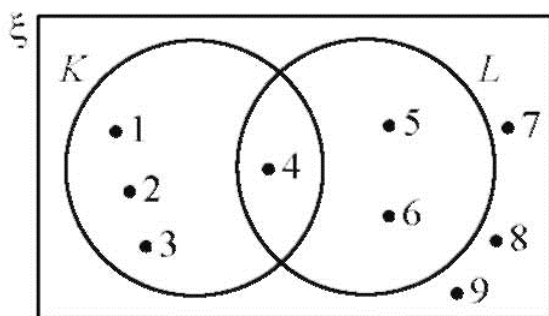
Diagram shows that a combination of solid geometry. Which of the following is a normal to plane $ABCD$.



Rajah 23
Diagram 23

- | | | | |
|----------|------|----------|------|
| A | AF | C | JK |
| B | HG | D | GM |

24. Gambar rajah Venn dalam Rajah 24 menunjukkan set semesta ξ , set K , dan set L .
The Venn diagram in Diagram 24 shows the universal set ξ , set K and set L .



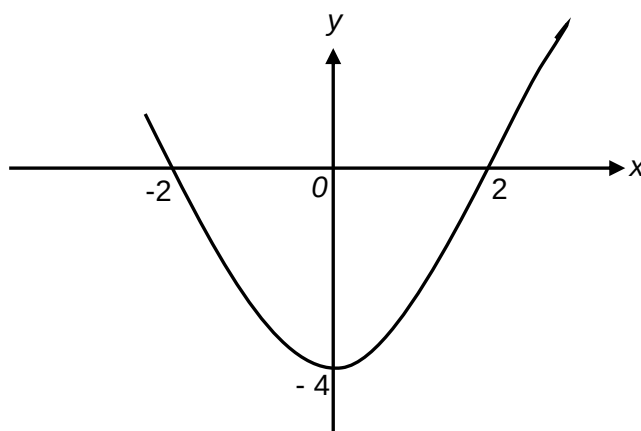
Rajah 24
Diagram 24

Senaraikan semua unsur bagi set L' .

List all the elements of set L' .

- | | | | |
|----------|------------------|----------|---------------------------|
| A | $\{1, 2, 3\}$ | C | $\{1, 2, 3, 7, 8, 9\}$ |
| B | $\{1, 2, 3, 4\}$ | D | $\{1, 2, 3, 4, 7, 8, 9\}$ |

25. Rajah 25 menunjukkan suatu fungsi kuadratik yang dilukis pada satu satah Cartes.
Diagram 25 shows a quadratic equation drawn on a Cartesian plane.



Rajah 25
 Diagram 25

Cari persamaan bagi graf itu.

Find the equation of the graph.

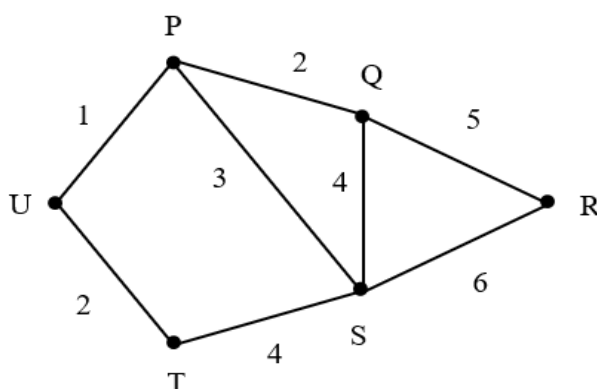
- | | | | |
|---|---------------|---|---------------|
| A | $y = x^2 + 2$ | C | $y = x^2 - 4$ |
| B | $y = x^2 - 2$ | D | $y = x^2 + 4$ |
26. Diberi $2 \times 5^3 + 5^2 + 3(5) = k_5$, cari nilai k.
Given that $2 \times 5^3 + 5^2 + 3(5) = k_5$, find the value of k.
- | | | | |
|---|----------|---|----------|
| A | 290_5 | C | 2130_5 |
| B | 2100_5 | D | 2150_5 |

27. Antara pernyataan berikut yang manakah pernyataan benar

Which of following statement is true statement?

- | | | | |
|---|-----------------------------|---|---|
| A | $1^0 = 1$ | C | 9 ialah nombor perdana
<i>9 is a prime number</i> |
| B | $13 \times 2 = 3 \times 13$ | D | Semua sudut tirus lebih daripada 90°
<i>All acute angles greater than 90°</i> |

28. Rajah 28 menunjukkan graf berpemberat dan tidak terarah. Heliza melukis satu pokok dengan jumlah pemberat minimum berdasarkan graf itu.
Diagram 28 shows a weighted and undirected graph. Heliza draws a tree with a minimum amount of weights based on the graph.



Rajah 28

Diagram 28

Hitung jumlah pemberat minimum tersebut.
Calculate the minimum number of weights.

- A** 12 **C** 14
B 13 **D** 15

29. Pengurus sebuah gedung pakaian mempunyai beberapa sasaran bagi pekerja jualannya.
The manager of a clothing store has several targets for his sales employees.

Pada bulan Mac jumlah masa, t yang digunakan untuk mengira inventori Gedung selebih-lebihnya 6 jam.

In March the total time, t used to calculate the store inventory was a maximum of 6 hours.

Jumlah jualan minimum sebulan dalam RM, x , ialah 19 000.

The minimum sales volume per month in RM, x , is 19 000.

Bina dua ketaksamaan linear berdasarkan situasi tersebut.
Construct two linear inequalities based on the situation.

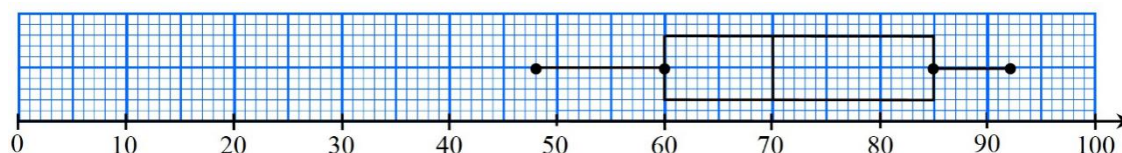
- | | | | |
|----------|----------------------------|----------|----------------------|
| A | $t \leq 6, x \geq 19\,000$ | C | $t > 6, x < 19\,000$ |
| B | $t \geq 6, x \leq 19\,000$ | D | $t > 6, x > 19\,000$ |

30. Kelab 3R ingin mengadakan kempen kitar semula di kawasan kejiranan. Mereka mendirikan pusat sehati pengumpulan bahan kitar semula dan ingin mengkaji kadar penggunaannya. Antara berikut, yang manakah merupakan andaian yang betul tentang bilangan penduduk yang akan menggunakan pusat sehati itu?
The 3R Club would like to hold a recycling campaign in the neighborhood. They set up a one-stop center for the collection of recycled materials and want to study the rate of its use. Which of the following is a correct assumption about the number of residents who will use the one-stop center?

- A** 100% orang yang berada berdekatan pusat sehati akan menggunakannya.
100% of the people near the one stop center would use it.
- B** 90% orang yang berada berdekatan pusat sehati akan menggunakannya kerana rumah mereka berada dalam jarak 0.5 km dari pusat sehati.
90% of the people near the one-shop center would use it as their house is within 05 km from the one-stop center.
- C** 20% orang yang berada berdekatan pusat sehati akan menggunakannya berdasarkan kajian sebelumnya.
20% of the people near the one-stop center would use it based on a previous study.
- D** Tiada orang yang berada berdekatan pusat sehati akan menggunakannya.
None of the people near the one-stop center would use it.

31. Rajah 31 menunjukkan sebuah plot kotak.

Diagram 31 shows a box plot.



Rajah 31/ Diagram 31

Cari julat antara kuartil bagi data di atas.

Find interquartile range for a data above.

- | | |
|-------------|-------------|
| A 25 | C 60 |
| B 50 | D 92 |

32. Diberi bahawa $P \propto \frac{1}{Q\sqrt{R}}$, dan $P = 2$ apabila $Q = 4$ dan $R = 9$. Hitung nilai R apabila $P = 4$ dan $Q = \frac{1}{2}$.

Given $P \propto \frac{1}{Q\sqrt{R}}$, and $P = 2$ when $Q = 4$ dan $R = 9$. Calculate the value of R when $P = 4$ and $Q = \frac{1}{2}$.

A 64

C 121

B 100

D 144

33. Pada bulan Februari 2022, Encik Patrick menerima jumlah pendapatan sebanyak RM4 500. Perbelanjaan tetap dan perbelanjaan tidak tetap bulanannya masing – masing ialah RM2 880 dan RM . Terdapat aliran tunai negatif sebanyak RM620. Hitung nilai .
In February 2022, Mr Patrick received a total income of RM4 500. The monthly fixed expenses and non - fixed expenses are RM2 880 and RM respectively. There was a negative cash flow of RM620. Calculate the value of .

A 1 000

C 3 500

B 2 240

D 3 880

34. $\begin{pmatrix} 2 & -7 & 15 \\ 6 & 13 & 8 \end{pmatrix}$ ialah satu matriks peringkat $m \times n$. Apakah nilai m dan n ?

$\begin{pmatrix} 2 & -7 & 15 \\ 6 & 13 & 8 \end{pmatrix}$ is a $m \times n$ matrix. What are the value of m and of n ?

A $m = 2, n = 3$

C $m = 2, n = 1$

B $m = 3, n = 2$

D $m = 3, n = 3$

35. Apakah maksud ko-insurans 80/20 ?

What does 80/20 co-insurance mean?

A Pemegang polisi menanggung 20 % daripada jumlah kerugian.

The policyholder bears 20 % of the total loss.

B Pemegang polisi membayar 20% daripada premium.

The policyholder pays 20% of the premium.

C Pemegang polisi akan menerima 80% dari nilai muka

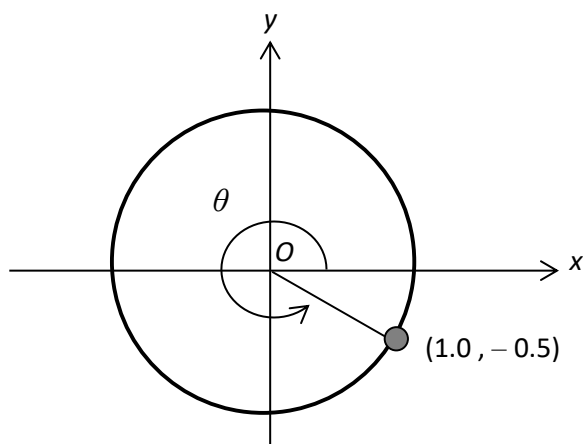
Police holder will receive 80% of advance value

D Pemegang polisi menanggung 80% daripada jumlah kerugian

Policyholders bear 80% of the total loss

36. Rajah 36, O ialah pusat bagi satu bulatan.

Diagram 36, O is the centre of a circle.



Rajah 36
Diagram 36

Nilai bagi $\tan \theta$ ialah

Value of $\tan \theta$ is

A 0.8

B -0.5

C -0.75

D -1.33

37. Pendapatan tahunan Encik Safri pada tahun 2021 ialah RM 75 650. Dia telah menderma RM 120 kepada sebuah badan kebajikan yang diluluskan oleh kerajaan. Dia juga membayar zakat berjumlah berjumlah RM 320. Jadual 37, menunjukkan pelepasan cukai yang dituntut oleh Encik Safri.

Mr Safri's annual income in 2021 is RM 75,650. He has donated RM 120 to a government -approved charity. He also paid zakat amounting to RM 320. Table 37, shows the tax relief claimed by Mr Safri.

Pelepasan cukai <i>Tax relief</i>	Amaun (RM) <i>Amount (RM)</i>
Individu / <i>Individual</i>	9000
Ibu bapa / <i>Parent</i>	3000
Gaya hidup / <i>Lifestyle</i>	750
Insurans hayat dan KWSP <i>Life insurance and EPF</i>	7000
Insurans Perubatan <i>Medical insurance</i>	1700

Jadual 37
Table 37

Hitung pendapatan bercukai Encik Safri pada tahun 2021.

Calculate Mr. Safri's chargeable income in 2021.

- A** RM 53 360 **C** RM 53 760
B RM 54 080 **D** RM 54 200

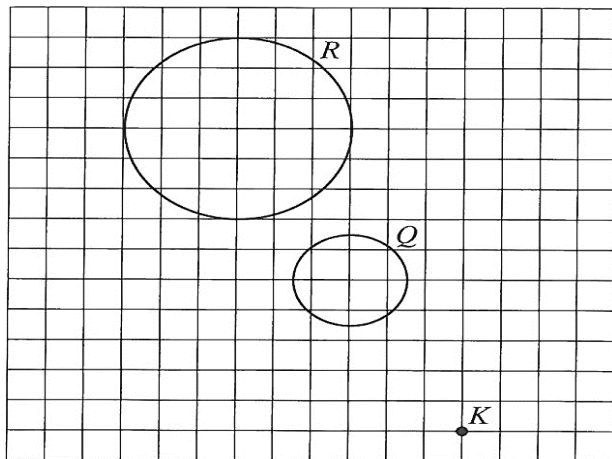
38. Perimeter sebuah segi empat tepat ialah 1.6×10^{-1} m. Diberi panjangnya ialah 5.0×10^{-2} m, cari lebarnya, dalam m.

The perimeter of a rectangle is 1.6×10^{-1} m. Given the length is 5.0×10^{-2} m, find the width, in m.

- A** 0.3×10^{-2} **C** 1.1×10^{-2}
B 0.3×10^{-1} **D** 6.0×10^{-1}

39. Rajah 39 menunjukkan dua bulatan, Q dan R , dilukis pada grid segi empat sama. R adalah imej bagi Q di bawah suatu pembesaran berpusat K

Diagram 39 shows two circles, Q and R , drawn on square grids. R is the image of Q under an enlargement about the centre K .



Rajah 39
Diagram 39

Faktor skala pembesaran itu ialah

The scale factor of the enlargement is

- A** -2
B $-\frac{1}{2}$

- C** $\frac{1}{2}$
D 2

40. Diberi bahawa $P = \{\text{faktor bagi } 16\}$ dan $Q = \{\text{nombor perdana yang kurang daripada } 15\}$. Senaraikan semua unsur bagi $P \cup Q$.

Given that $P = \{\text{factors of } 16\}$ and $Q = \{\text{prime numbers less than } 15\}$.

List all the elements of $P \cup Q$.

- A** $\{1, 2, 3, 4, 8, 16\}$

- B** $\{2, 3, 5, 7, 8, 11, 18\}$

- C** $\{2, 3, 4, 5, 7, 11, 13, 16\}$

- D** $\{1, 2, 3, 4, 5, 7, 8, 11, 13, 16\}$

MAKLUMAT UNTUK CALON
INFORMATION FOR CANDIDATES

1. Kertas peperiksaan ini adalah dalam dwibahasa. Soalan dalam Bahasa Melayu mendahului soalan yang sepadan dalam Bahasa Inggeris.
This question paper is bilingual. Question in Malay language precede the corresponding question in the English language.
2. Kertas peperiksaan ini mengandungi **40** soalan.
*This question paper consists of **40** questions.*
3. Jawab **semua** soalan.
*Answer **all** questions.*
4. 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.
5. Hitamkan **satu** ruangan sahaja bagi setiap soalan.
*Blacken only **one** space for each question.*
6. Sekiranya anda hendak menukar jawapan, padamkan tanda yang telah dibuat. Kemudian hitamkan jawapan yang baharu.
If you wish to change your answer, erase the blackened mark that you have done. Then blacken the space for the new answer.
7. Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.
The diagrams in the questions provided are not drawn to scale unless stated.
8. Satu senarai rumus disediakan di halaman 2 hingga 4.
A list of formulae is provided on the pages 2 to 4.
9. Anda dibenarkan menggunakan kalkulator saintifik.
You may use a scientific calculator.