

FORM 1 MATHEMATICS (REVISION) SECTION B & C

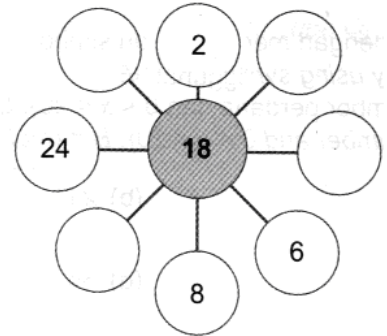
BAHAGIAN B (20 markah)

1. Rajah di bawah menunjukkan faktor-faktor bagi 24.
Diagram below shows the factors of 24.

Tuliskan faktor-faktor yang tertinggal.
Write the missing factors.

[4 markah/4 marks]

1, 3, 4, 12



2. Padankan setiap yang berikut dengan nilai yang betul.
Match each of the following with the correct value.

(a) $(-3)^3$ -64

(b) $(-8)^2$ -27

(c) $\sqrt{169}$ -6

(d) $\sqrt[3]{-216}$ 9

6
13
64

[4 markah/4 marks]

3. Lengkapkan setiap yang berikut dengan menggunakan simbol \in atau \notin .
Complete each of the following by using symbol \in or \notin .

Diberi bahawa $A = \{x : x \text{ ialah nombor perdana dan } 0 < x < 20\}$. $B = \{\text{gandaan bagi } 3\}$.
Given that $A = \{x : x \text{ is a prime number and } 0 < x < 20\}$. $B = \{\text{multiples of } 3\}$.

- (a) $2 \square A$ (b) $21 \square A$ (c) $27 \square B$ (d) $36 \square B$

[4 markah/4 marks]

(a) \in (b) \notin (c) \in (d) \in

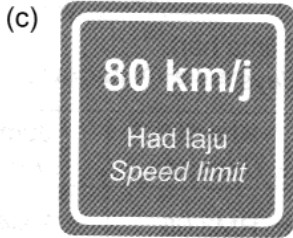
4. Pada setiap rajah di bawah, tulis ketaksamaan linear dengan menggunakan simbol $<$, $>$, \leq dan \geq bagi setiap situasi yang berikut.
In each of the diagrams below, write the linear inequalities using symbols $<$, $>$, \leq and \geq for the following situations.

(a) Kandungan boleh mencapai jisim maksima tepung
The content may reach the maximum mass of flour

Kandungan/Content 350 g

(b) **Kereta untuk dilelong
Car for Auction**

Harga/Price RM25 000



Laju/Speed 80 km/j/80 km/h

(a) \geq	(c) \leq
(b) \geq	(d) \leq

(d)



Bilangan penumpang bagi sebuah teksi tidak boleh melebihi 5 orang.

The number of passengers in a taxi must not exceed 5 person.

Bilangan penumpang/ Number of passengers

5

[4 markah/4 marks]

5. (a) Padankan setiap sisi empat berikut dengan sifat geometri yang betul.

Match each of the following quadrilaterals with the correct geometric property.

[2 markah/marks]

Jawapan/Answer:

(i) Rombus Rhombus	•	•	Sepasang sudut bertentangan adalah sama. A pair of opposite angles is equal.
(ii) Lelayang Kite	•	•	Bilangan paksi simetri ialah 4. The number of axes of symmetry is 4.
		•	Sisi-sisi yang bertentangan adalah selari. The opposite sides are parallel.

(b) Bulatkan ungkapan algebra yang mempunyai tiga sebutan.

Circle the algebraic expressions which have three terms.

[1 markah/mark]

Jawapan/Answer:

$4pqr$	$5x + y - 4z$	$8mn - p + 12$
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(c) Isi tempat kosong dengan menyatakan pekali dan pemboleh ubah bagi sebutan algebra berikut.

Fill in the blanks by stating the coefficient and the variable of the algebraic term.

[1 markah/mark]

Jawapan/Answer:

Sebutan algebra Algebraic term	Pekali Coefficient	Pemboleh ubah Variable
$8xy$	8	xy

BAHAGIAN C (20 markah)

1. (a) Permudahkan/Simplify
 $4p^3q \times (-3p^4q^3r) \div 8p^5q^3r$

[3 markah/3 marks]

Jawapan/Answer:

$$\begin{aligned} & \frac{4p^3q \times (-3p^4q^3r)}{8p^5q^3r} \\ &= \frac{-12p^7q^4r}{8p^5q^3r} \\ &= -\frac{3p^2q}{2} \end{aligned}$$

- (b) Lengkapkan langkah-langkah operasi di bawah dengan mengisi petak-petak kosong menggunakan nombor yang sesuai.
 Complete the steps of operation below by filling in the boxes using suitable numbers.

[4 markah/4 marks]

Jawapan/Answer:

$$\begin{aligned} \left(\sqrt[3]{\frac{27}{64}} + \sqrt{2\frac{1}{4}}\right)^2 &= \left(\frac{3}{\boxed{}} + \sqrt{\frac{\boxed{}}{4}}\right)^2 \\ &= \left(\frac{\boxed{}}{4}\right)^2 \\ &= \boxed{} \end{aligned}$$

$$\begin{aligned} & \left(\sqrt[3]{\frac{27}{64}} + \sqrt{2\frac{1}{4}}\right)^2 \\ &= \left(\frac{3}{4} + \sqrt{\frac{9}{4}}\right)^2 \\ &= \left(\frac{9}{4}\right)^2 \\ &= \frac{81}{16} \end{aligned}$$

- (c) Rajah di bawah menunjukkan cetakan laporan ujian kelayakan dalam talian yang diduduki oleh Norlia.
 The diagram below shows a printed report of a qualifying online test by Norlia.

Laporan Ujian Kelayakan Qualifying Test Report	
Nama/Name:	Norlia
Masa penghantaran/Submission date:	11.10 a.m.
Jumlah soalan yang dijawab/Total questions answered:	60
Purata masa menjawab setiap soalan/Average time for each question:	1.25 minit/minutes
Log masuk semula untuk melihat keputusan/Login again to view result	

Nyatakan waktu Norlia mula menjawab soalan dalam talian.
 State the time Norlia begins to answer the online questions.

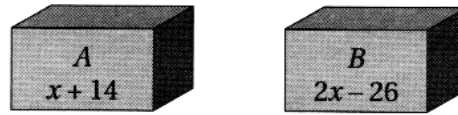
[3 markah/3 marks]

Jawapan/Answer:

Jumlah masa menjawab semua soalan	= 1.25×60
<i>Total time to answer all questions</i>	= 75 minit/minutes
	= 1 jam 15 minit
	1 hour 15 minutes

Waktu Norlia mula menjawab = 11 jam 10 minit – 1 jam 15 minit
 soalan 11 hours 10 minutes – 1 hour 15 minutes
 The time Norlia begins to answer the questions = 9 jam 55 minit / 9 hours 55 minutes
 = 9.55 a.m.

2. (a) (a) Rajah 9 menunjukkan dua buah kotak, A dan B yang mengandungi bilangan buah epal yang sama banyak.
 Diagram 9 shows two boxes, A and B which contain the same number of apples.



Rajah 9/Diagram 9

Berdasarkan Rajah 9, / Based on Diagram 9,

- (i) tulis satu persamaan linear, / write a linear equation,

[1 markah/mark]

Jawapan/Answer:

$$x + 14 = 2x - 26$$

- (ii) cari jumlah bilangan epal di dalam kotak A dan kotak B jika nilai $x = 40$.
 find the total number of apples in box A and box B if the value of $x = 40$.

[2 markah/marks]

Jawapan/Answer:

Kotak A/Box A: $x + 14 = 40 + 14$	Jumlah epal/Total number of apples
$= 54$	$= 54 + 54$
Kotak B/Box B: $2x - 26 = 2(40) - 26$	$= 108$ biji/apples
$= 54$	

- (b) (i) Cari faktor sepunya terbesar bagi 12, 24 dan 36.
 Find the highest common factor of 12, 24 and 36.

[2 markah/marks]

Jawapan/Answer:

2	12, 24, 36	FSTB/HCF = $2 \times 2 \times 3 = 12$
2	6, 12, 18	
3	3, 6, 9	
	1, 2, 3	

- (ii) Cari gandaan sepunya terkecil (GSTK) bagi 20 dan 30.
 Find the lowest common multiple (LCM) of 20 and 30.

[2 markah/marks]

Jawapan/Answer:

10	20, 30	GSTK/LCM = $10 \times 3 \times 2 = 60$
2	2, 3	
3	1, 3	
	1, 1	

- (c) Selesaikan ketaksamaan linear serentak yang berikut.
 Solve the following simultaneous linear inequalities.

$$2(7 - x) > 4 \quad \text{dan/and} \quad 4 - \frac{2}{3}x \leq 6$$

[4 markah/4 marks]

Jawapan/Answer:

$2(7 - x) > 4$ $14 - 2x > 4$ $-2x > -10$ $x < \frac{-10}{-2}$ $x < 5$	$4 - \frac{2}{3}x \leq 6$ $-\frac{2}{3}x \leq 2$ $-2x \leq 6$ $x \geq \frac{6}{-2}$ $x \geq -3$	Penyelesaian ialah $-3 \leq x < 5$ The solution is $-3 \leq x < 5$
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3. (a) Permudahkan/Simplify

$$\frac{3}{5}(p - 5q + 15) - 3(p - 9)$$

[3 markah/marks]

Jawapan/Answer:

$$\begin{aligned} \frac{3}{5}(p - 5q + 15) - 3(p - 9) &= \frac{3}{5}p - 3q + 9 - 3p + 27 \\ &= \frac{3}{5}p - 3p - 3q + 9 + 27 \\ &= -\frac{12}{5}p - 3q + 36 \end{aligned}$$

(b) Diberi bahawa/ It is given that

$$x = \sqrt[3]{-0.216} \times \frac{1}{\sqrt{16}} \div \sqrt[4]{1\frac{17}{64}}$$

Cari nilai x. Berikan jawapan dalam pecahan termudah.

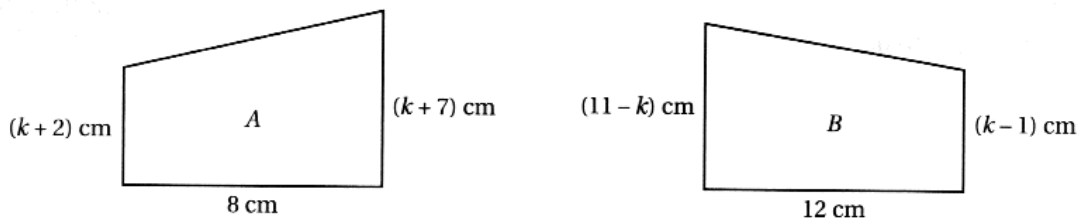
Find the value of x. Give the answer as a fraction in the simplest form.

[3 markah/marks]

Jawapan/Answer:

$$\begin{aligned} x &= \sqrt[3]{-0.216} \times \frac{1}{\sqrt{16}} \div \sqrt[4]{1\frac{17}{64}} \\ &= -0.6 \times \frac{1}{4} \times \frac{8}{9} \\ &= -\frac{2}{15} \end{aligned}$$

(c) Rajah 10 menunjukkan dua buah trapezium, A dan B yang mempunyai luas yang sama.
Diagram 10 shows two trapeziums, A and B which have the same area.



Rajah 10/Diagram 10

Cari nilai bagi k.

Find the value of k.

[4 markah/marks]

Jawapan/Answer:

$$\frac{1}{2} \times (k + 2 + k + 7) \times 8 = \frac{1}{2} \times (11 - k + k - 1) \times 12$$

$$4(2k + 9) = 6(10)$$

$$8k + 36 = 60$$

$$8k = 60 - 36$$

$$k = 3$$

4. (a) Diberi $p : q : r = 9 : 2 : 13$ dan $r - q = \text{RM}132$, cari nilai, dalam RM, bagi $p + q + r$.
 Given $p : q : r = 9 : 2 : 13$ and $r - q = \text{RM}132$, find the value, in RM, of $p + q + r$.

[3 markah/marks]

Jawapan/Answer:

$$p : q : r = 9 : 2 : 13$$

$$r - q = \text{RM}132$$

$$(13 - 2) \text{ bahagian/parts} = \text{RM}132$$

$$11 \text{ bahagian/parts} = \text{RM}132$$

$$1 \text{ bahagian/part} = \text{RM}12$$

$$p + q + r = (9 + 2 + 13) \times \text{RM}12 = \text{RM}288$$

- (b) (a) Rajah 14 menunjukkan Azzim sedang menaiki tangga ke sebuah bilik.
 Diagram 14 shows Azzim is climbing the stairs to a room.

- (i) Cari tinggi, dalam m, bagi QR.

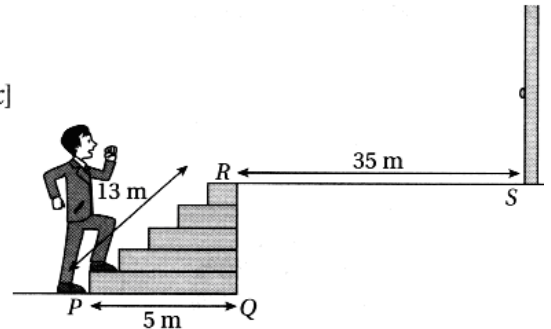
Find the height, in m, of QR. [1 markah/mark]

Jawapan/Answer:

$$QR^2 = 13^2 - 5^2$$

$$QR = \sqrt{144}$$

$$= 12 \text{ m}$$



Rajah 14/Diagram 14

- (ii) Cari jarak, dalam m, antara titik Q dan titik S.

Find the distance, in m, between point Q and point S.

Jawapan/Answer:

$$QS^2 = 35^2 + 12^2$$

$$QS = \sqrt{1369}$$

$$= 37 \text{ m}$$

[2 markah/marks]

- (c) Rajah 16 menunjukkan harga dan diskaun bagi beberapa jenis barangan yang ditawarkan oleh sebuah kedai.

Diagram 16 shows the price and discount of several items offered by a shop.

		
RM99 Diskaun 10% Discount 10%	RM199 Diskaun 30% Discount 30%	RM599 Diskaun 70% Discount 70%

Rajah 16/Diagram 16

Jika Zurin mempunyai RM500, barangan yang manakah boleh dibelinya? Buktikan.

If Zurin have RM500, which items that she can buy? Prove it.

[4 markah/marks]

Jawapan/Answer:

<p>Harga sehelai baju/Price of a shirt = $\frac{90}{100} \times \text{RM}99$ = RM89.10</p> <p>Harga sepasang kasut/Price of a pair of shoes = $\frac{70}{100} \times \text{RM}199 = \text{RM}139.30$</p> <p>Harga sebuah beg tangan/Price of a handbag = $\frac{30}{100} \times \text{RM}599 = \text{RM}179.70$</p>	<p>Jumlah harga/Total price = RM89.10 + RM139.30 + RM179.7 = RM408.10 Zurin boleh membeli ketiga-tiga barang tersebut. Zurin can buy all the items.</p>
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5. (a) Dalam Rajah 11, PQ dan RS ialah garis selari.
In Diagram 11, PQ and RS are parallel lines.

Cari nilai $x + y$.

Find the value of $x + y$.

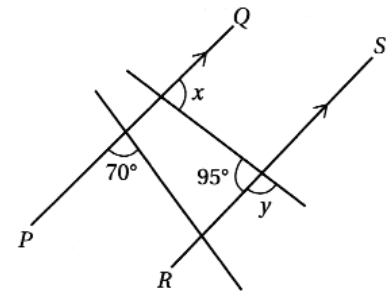
[3 markah/marks]

Jawapan/Answer:

$$y = 180^\circ - 95^\circ = 85^\circ$$

$$x = 95^\circ$$

$$x + y = 95^\circ + 85^\circ = 180^\circ$$



Rajah 11/Diagram 11

- (b) Senaraikan dan wakilkan hubungan set yang berikut dengan menggunakan gambar rajah Venn.
List and represent the relationship of the following sets by using a Venn diagram.

$\xi = \{\text{digit bagi } 348\ 752/\text{digits of } 348\ 752\}$

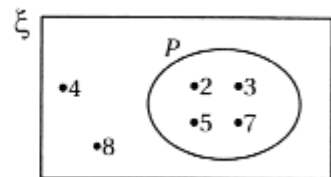
$P = \{\text{nombor perdana yang kurang daripada } 10/\text{prime numbers which are less than } 10\}$

[3 markah/marks]

Jawapan/Answer:

$$\xi = \{2, 3, 4, 5, 7, 8\}$$

$$P = \{2, 3, 5, 7\}$$



- (c) Dalam Rajah 13, ABC ialah sebuah segi tiga dan JKLM ialah sebuah segi empat sama. D dan E masing-masing ialah titik tengah bagi JM dan JK.
In Diagram 13, ABC is a triangle and JKLM is a square. D and E are midpoints of JM and JK respectively.

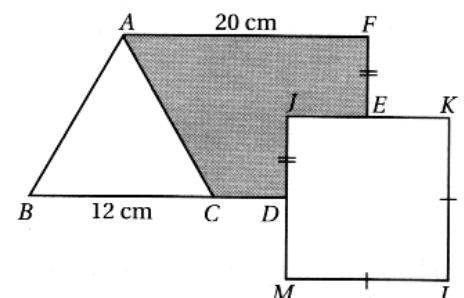
Diberi luas JKLM ialah 64 cm^2 .

Given the area of JKLM is 64 cm^2 .

- (i) Cari perimeter, dalam cm, kawasan berlorek.
Find the perimeter, in cm, of the shaded region.

Jawapan/Answer:

[2 markah/marks]



Rajah 13/Diagram 13

$$JK = \sqrt{64} = 8 \text{ cm}$$

$$JE = 8 \text{ cm} \div 2 = 4 \text{ cm}$$

$$AC = \sqrt{6^2 + 8^2} = 10 \text{ cm}$$

$$\begin{aligned} \text{Perimeter/Perimeter} \\ &= AF + EF + EJ + DJ + CD + AC \\ &= 20 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} + 10 \text{ cm} + 10 \text{ cm} \\ &= 52 \text{ cm} \end{aligned}$$

(ii) Hitung luas, dalam cm^2 , seluruh rajah.

Calculate the area, in cm^2 , of the whole diagram.

[2 markah/marks]

Jawapan/Answer:

$$\begin{aligned} &\text{Luas seluruh rajah/Area of the whole diagram} \\ &= \left(\frac{1}{2} \times 12 \times 8\right) + 64 + (4 \times 4) + \left(\frac{1}{2} \times (10 + 16) \times 8\right) \\ &= 48 + 64 + 16 + 104 \\ &= 232 \text{ cm}^2 \end{aligned}$$

6. (a) Rajah di bawah menunjukkan kubus P dan kubus Q dengan jumlah luas permukaan masing-masing ialah 864 cm^2 dan $1\,536 \text{ cm}^2$.

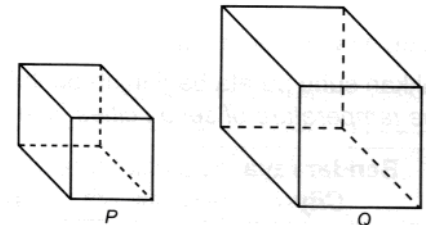
Diagram below shows cube P and cube Q with total surface area of 864 cm^2 and $1\,536 \text{ cm}^2$ respectively.

Hitung beza isi padu kubus P dan kubus Q .

Calculate the difference in volume between cube P and cube Q .

Jawapan/Answer:

[3 markah/3 marks]



(a) Panjang sisi kubus P /Length of side of cube P

$$= \sqrt{864 \div 6}$$

$$= \sqrt{144}$$

$$= 12 \text{ cm}$$

Isi padu kubus P /Volume of cube P

$$= 12^3$$

$$= 1\,728 \text{ cm}^3$$

Panjang sisi kubus Q /Length of side of cube Q

$$= \sqrt{1\,536 \div 6}$$

$$= \sqrt{256}$$

$$= 16 \text{ cm}$$

Isi padu kubus Q /Volume of cube Q

$$= 16^3 = 4\,096 \text{ cm}^3$$

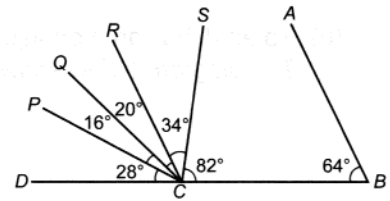
Maka, beza isi padu antara kubus P dan kubus Q

Hence, the difference in volume between cube P and cube Q .

$$= 4\,096 - 1\,728$$

$$= 2\,368 \text{ cm}^3$$

- (b) Dalam rajah di sebelah, DCB ialah satu garis lurus.
In the diagram, DCB is a straight line.



- (i) Nyatakan garis yang selari dengan garis AB .
State the line which is parallel to the line AB .

[1 markah/1 mark]

Jawapan/Answer:

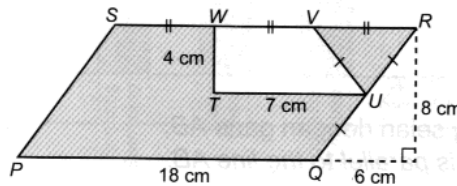
(i) RC
 (ii) $\angle PCR = 16^\circ + 20^\circ$
 $= 36^\circ$

[1 markah/1 mark]

- (ii) Cari nilai $\angle PCR$.
Find the value of $\angle PCR$.

Jawapan/Answer:

- (c) Rajah di bawah menunjukkan segi empat selari $PQRS$ dan trapezium $TUVW$.
The diagram below shows a parallelogram $PQRS$ and a trapezium $TUVW$.



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

[4 markah/4 marks]

Jawapan/Answer:

$$QR = \sqrt{8^2 + 6^2}$$

$$= 10 \text{ cm}$$

$$QU = UR = UV = 5 \text{ cm}$$

$$WV = SW = VR$$

$$= 18 \div 3 = 6 \text{ cm}$$

Luas kawasan berlorek/Area
 of shaded region

$$= (18 \times 8) - \left(\frac{1}{2} \times (6 + 7) \times 4\right)$$

$$= 144 - 26$$

$$= 118 \text{ cm}^2$$