

Nama: _____

SKOR

Peratus

Gred

Ujian Akhir Sesi Akademik Matematik [50]

Tingkatan 1

2 jam

KERTAS MODEL

1

Dua jam

BUKA KERTAS UJIAN INI APABILA DIBERITAHU

Bahagian A / Section A

[20 markah / 20 marks]

Jawab semua soalan.

Answer all questions.

1. Selesaikan/ Solve

$$\frac{-2(9) - (-30)}{-3}$$

- A -4
- B -16
- C 4
- D 16

2. Hitung / Calculate

$$\left(2\frac{1}{3} - 1\frac{1}{4}\right) \div 1\frac{5}{8} \times 6$$

- A $\frac{2}{3}$
- B 4
- C 6
- D $10\frac{9}{16}$

3. Senarai di bawah menunjukkan nombor perdana dalam tertib menaik.

The list below shows the prime numbers in ascending order.

23, 29, 31, P, 41, 43, Q, 53, R

Nyatakan nilai P, Q dan R.

State the values of P, Q and R.

	P	Q	R
A	33	37	45
B	37	47	51
C	37	47	59
D	37	47	61

4. Diberi $(x - 3)$ ialah faktor sepunya terbesar bagi 14 dan 35, maka nilai x ialah

Given that $(x - 3)$ is the highest common factor of 14 and 35, hence the value of x is

- A 7
- B 10
- C 70
- D 73

5. Hitung / Calculate

$$\sqrt{324} - 3^2 - \left(-\frac{1}{2}\right)^2$$

- A -8.75
- B 8.75
- C -9.5
- D -8.5

6. Nilaikan $\left(-2\frac{1}{4}\right)^3$ dan berikan jawapan kepada dua tempat perpuluhan.

Evaluate $\left(-2\frac{1}{4}\right)^3$ and give the answer correct to two decimal places.

- A 5.05
 B -5.06
 C 11.39
 D -11.39
7. Nyatakan kuantiti yang terlibat dalam pernyataan berikut.
 State the quantities involved in the following statement.
- Laju sebuah kereta di lebuh raya ialah 90 km/j.
 The speed of a car in highway is 90 km/h.
- A Jarak dan masa
 Distance and time
 B Panjang dan hari
 Length and day
 C Jarak dan jam
 Distance and hour
 D Tinggi dan masa
 Height and time
8. Sudut-sudut sebuah segi tiga adalah dalam nisbah 2 : 3 : 7. Hitung beza antara sudut terbesar dengan sudut terkecil.
 The angles of a triangle are in the ratio of 2 : 3 : 7. Calculate the difference between the largest angle and the smallest angle.
- A 15° C 60°
 B 50° D 75°
9. Diberi $p : q = 5 : 3$ dan $p + q = 100\%$, cari peratusan bagi p .
 Given that $p : q = 5 : 3$ and $p + q = 100\%$, find the percentage of p .
- A 60% C 62.5%
 B 62% D 63%

10. Antara berikut, yang manakah merupakan sebutan serupa?
 Which of the following are the like terms?

- A a^2b, b^2c
 B ab^5, a^5b
 C $2a^3b, \frac{2}{a^3b}$
 D $-3a^2b, \frac{b}{5}a^2$

11. Permudahkan/ Simplify

$$-2m^2q^3 + 7mq - \frac{6mq - 9q^3m^2}{3}$$

- A $8m^2q^3$
 B $mq(5 + mq^2)$
 C $-5mq(1 - mq^2)$
 D $5mq(mq^2 + 1)$

12. Diberi $3r^2 - 6s = 57$. Hitung nilai r jika $s = 3$.

Given $3r^2 - 6s = 57$. Calculate the value of r if $s = 3$.

- A 5
 B 7.8
 C 39
 D 75

13. Hanis membeli x pekset pensel dengan harga RM6 sepekset. Dia membayar RM50 dan menerima baki lebih daripada RM2.

Hanis purchased x packs of pencils priced at RM6 per pack. She paid RM50 and received a change that was more than RM2.

Bina satu ketaksamaan bagi x berdasarkan situasi di atas.

Construct an inequality for x based on the situation above.

- A $x < 8$
 B $x \leq 8$
 C $x > 8$
 D $x \geq 8$

14. Antara rajah berikut, yang manakah merupakan contoh sudut konjugat?
Which of the following diagrams shows an example of conjugate angles?

A



B



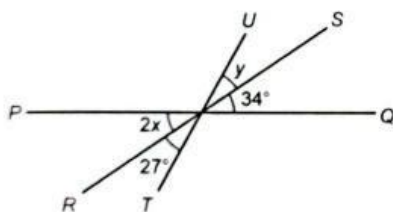
C



D



15. Dalam rajah di bawah, PQ , RS dan TU ialah garis lurus.
In the diagram below, PQ , RS and TU are straight lines.

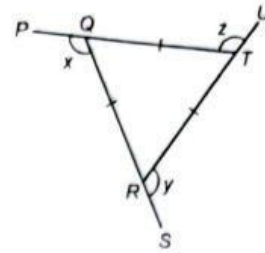


Hitung nilai $x + y$.

Calculate the value of $x + y$.

- A 44°
B 56°
C 61°
D 63°

16. Dalam rajah di bawah, PQT , QRS dan RTU ialah garis lurus.
In the diagram below, PQT , QRS and RTU are straight lines.



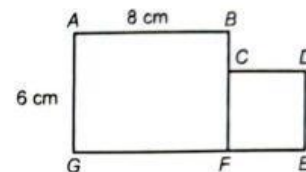
Nyatakan nilai bagi $x + y + z$.

State the value of $x + y + z$.

- A 180°
B 240°
C 300°
D 360°

17. Rajah di bawah menunjukkan sebuah segi empat tepat $ABFG$ dan sebuah segi empat sama $CDEF$. Diberi $CF = \frac{2}{3}AG$.

The diagram shows a rectangle $ABFG$ and a square $CDEF$. It is given that $CF = \frac{2}{3}AG$.



Cari perimeter dalam cm, bagi seluruh rajah.

Find the perimeter, in cm, of the whole diagram.

- A 36 C 46
B 44 D 48

18. Diberi $Q = \{x : 3 \leq x \leq 15, x \text{ ialah nombor perdana}\}$. Senaraikan semua unsur set Q .
Given that $Q = \{x : 3 \leq x \leq 15, x \text{ is a prime number}\}$. List all the elements of set Q .

- A 3, 15
B 3, 5, 7, 11, 13
C 3, 5, 7, 9, 11, 13
D 3, 5, 7, 9, 11, 13, 15

19. Punitha mengukur tinggi, dalam mm, 20 batang anak pokok di rumah hijau. Hasilnya ditunjukkan di plot batang-dan-daun di bawah.

Punitha measures the heights, in mm, of 20 plants in her greenhouse. The results are shown in the stem-and-leaf plot below.

Batang / Stem	Daun / Leaf
15	3 3 3 5
16	2 3 4 6 8 8
17	4 5 6 6 7
18	1 2 9
19	8 8

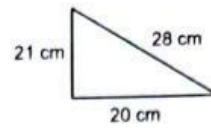
Kekunci: 15 | 3 bermakna 153 mm
Key: 15 | 3 means 153 mm

Cari median dalam mm
Find the median in mm.

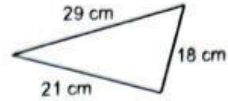
- A 168
- B 171
- C 172
- D 174

20. Antara berikut, yang manakah merupakan segi tiga bersudut tegak?
Which of the following is a right-angled triangle?

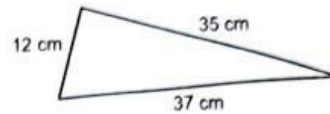
A



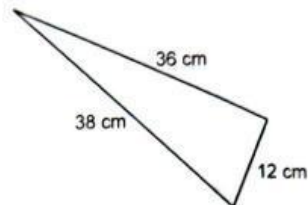
B



C



D



BAHAGIAN B
[20 markah / 20 marks]

Jawab semua soalan.
Answer all questions.

1. (a) Isi petak dengan integer di bawah supaya pernyataan itu benar.
Fill in the boxes by using the integers below to make a true statement.

7

-18

Jawapan / Answer:

lebih besar daripada
is greater than

[1 markah / 1 mark]

- (b) Jadual di bawah menunjukkan bilangan murid di empat buah Tadika Perpaduan.
The table below shows the number of pupils at four Unity Kindergartens.

Tadika Perpaduan Unity Kindergarten	Bilangan murid Number of pupils	Sudut sektor dalam carta pai Angle of sector in pie chart
Anggerik	45	90°
Cempaka	50	
Dahlia	30	
Mawar	55	

Jika data dalam jadual itu diwakilkan dengan carta pai, lengkapkan jadual dengan nilai sudut sektor yang betul.

If the data in the table is represented by a pie chart, complete the table with the correct values for the angles of sectors.

[3 markah / 3 marks]

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

Jawapan / Answer:

<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> $(-7)^2$ </div>	<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> 0.125 </div>
<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> $\sqrt{64}$ </div>	<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> 5 </div>
<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> $\sqrt[3]{27}$ </div>	<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> 3 </div>
<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> $\left(\frac{1}{2}\right)^3$ </div>	<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> 49 </div>
	<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> 8 </div>

[4 markah / 4 marks]

3. (a) Bulatkan sebutan serupa daripada senarai di bawah.
 Circle the like terms from the list below.

Jawapan / Answer:

$-\frac{1}{3}mn$	$\frac{m}{3n}$	$20m$	$3m^2n^2$	$0.25nm$
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[2 markah / 2 marks]

- (b) Tandakan (✓) untuk persamaan linear dalam dua pemboleh ubah.
 Mark (✓) for linear equations in two variables.

Jawapan / Answer:

$2g - h = 7$	
$0.5x + 3y^2 = 11$	
$3m = 12 - 2n$	
$2p + \frac{5}{q} = 13$	

[2 markah / 2 marks]

4. (a) Tandakan (✓) faktor bagi 297 yang betul.
 Mark (✓) the correct factors of 297.

Jawapan / Answer:

3	7	9	13

[2 markah / 2 marks]

- (b) Isi petak kosong dengan simbol "<" atau ">" yang betul.
 Fill in the boxes with the correct symbol "<" or ">".

Jawapan / Answer:









(i) -15 -8

(ii) 23 $\frac{50}{2}$

[2 markah / 2 marks]

5. (a) Tandakan (✓) pasangan sudut pelengkap yang betul.
 Mark (✓) for the correct pairs of complementary angles.

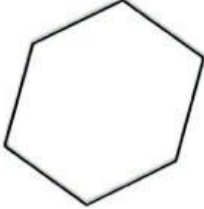

Jawapan / Answer:

 40°	 50°	<input style="width: 60px; height: 25px;" type="text"/>
 150°	 25°	<input style="width: 60px; height: 25px;" type="text"/>
 60°	 120°	<input style="width: 60px; height: 25px;" type="text"/>
 80°	 10°	<input style="width: 60px; height: 25px;" type="text"/>

[2 markah / 2 marks]

(b) Namakan poligon berikut.
Name the following polygons.

Jawapan / Answer:

(i) 	
(ii) 	

[2 markah / 2 marks]