

NAME : \_\_\_\_\_

FORM : 1A/1B/1C/1D/1E

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**MATHEMATICS F1**  
**2011**  
**1 HOUR 15 MINUTES**



**SMK SUNGAI UDANG**  
**76300 SUNGAI UDANG, MELAKA**

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**MATHEMATICS**  
**FORM 1**

**1 HOUR 15 MINUTES**

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**DO NOT OPEN THE QUESTION PAPER UNTIL YOU ARE TOLD TO DO SO**

**INFORMATION FOR CANDIDATES:**

1. This question paper consists of **40 questions**.
2. Answer all the questions.
3. The diagrams provided in the questions **are not drawn to scale** unless stated.
4. You may use a non-programmable scientific calculator.

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**This question paper consists of (18) pages**

This question paper consists of 40 questions. Answer all the questions. For each question, choose only one answer from the options, A, B, C and D. you may use a non-programmable scientific calculator.

*Kertas soalan ini terdiri daripada 40 soalan. Jawab semua soalan. Bagi setiap soalan, pilih satu jawapan sahaja daripada pilihan jawapan, iaitu A, B, C dan D. anda dibenarkan menggunakan kalkulator saintifik yang tidak boleh diprogram.*

1. Round off 235 621 to the nearest ten thousand.

*Bundarkan 235 621 kepada puluh ribu yang terdekat.*

A 235 600

B 236 000

C 240 000

D 300 000

2. Which of the following is the lowest common multiple (LCM) of 8 and 15?

*Antara yang berikut, yang manakah ialah gandaan sepunya terkecil (GSTK) bagi 8 dan 15?*

A 64

B 90

C 120

D 240

3. Which of the following fractions is equivalent to  $\frac{4}{7}$ ?

*Antara berikut, pecahan yang manakah setara dengan  $\frac{4}{7}$ ?*

A  $\frac{7}{14}$

B  $\frac{5}{15}$

C  $\frac{12}{21}$

D  $\frac{15}{28}$

4. Diagram 1 shows a sequence of prime numbers.  
*Rajah 1 menunjukkan satu urutan nombor perdana.*

$47, m, 59, 61, n$
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Diagram 1  
*Rajah 1*

Find the value of  $n - m$ .

Cari nilai bagi  $n - m$ .

- A 12  
B 13  
C 14  
D 16
5. Express  $17\frac{21}{100}$  as a decimal number.

*Ungkapkan  $17\frac{21}{100}$  sebagai nombor perpuluhan.*

- A 17.00021  
B 17.0021  
C 17.021  
D 17.21

6. Diagram 2 shows some factors of 42.

*Rajah 2 menunjukkan beberapa faktor bagi 42.*

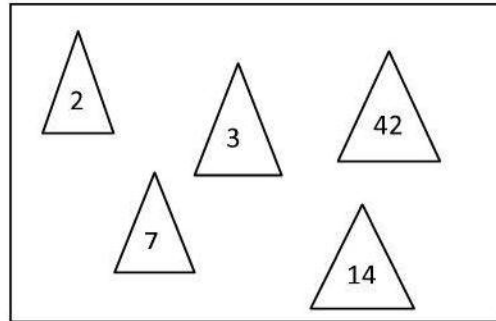


Diagram 2

*Rajah 2*

Identify three other factors of 42.

*Kenal pasti tiga faktor bagi 42.*

- A 1, 6 and 12  
B 1, 6 and 21  
C 4, 8 and 10  
D 6, 9 and 12
7. Given 20% of M is 60. Find the value of M.  
*Diberi 20% daripada M ialah 60. Cari nilai M.*  
A 24  
B 30  
C 120  
D 300
8. From the set of integers, -15, 8, 9, -7 and 2, find the sum of the largest integer and the smallest integer.  
*Daripada set integer, -15, 8, 9, -7 dan 2, cari hasil tambah bagi integer terbesar dan integer terkecil.*  
A -13  
B -6  
C 7  
D 10

9. Which of the following pairs of numbers has 6 as the highest common factor?

*Antara berikut, pasangan nombor yang manakah mempunyai 6 sebagai faktor sepunya terbesar?*

- A 12, 24
- B 30, 42
- C 36, 54
- D 60, 72

10. Which of the following statement is true?

*Antara berikut, pernyataan yang manakah benar?*

- A -6 is greater than -5.  
*-6 lebih besar daripada -5.*
- B 0 is greater than -1.  
*0 lebih besar daripada -1.*
- C 5 is less than -5.  
*5 kurang daripada -5.*
- D -12 is less than -15.  
*-12 kurang daripada -15.*

11. Which of the following terms has 9 as the coefficient of x?

*Antara berikut, sebutan yang manakah mempunyai 9 sebagai pekali bagi x?*

- A  $\frac{1}{9}x$
- B  $x$
- C  $9x$
- D  $-4x$

12.  $8 + 5c - 9 + (-3c) =$

- A  $2c - 1$
- B  $2c + 1$
- C  $8c - 17$
- D  $8c - 1$

13. State the number of terms in the expression  $3p - 4q + r - 2s + 1$ .

*Nyatakan bilangan sebutan dalam ungkapan  $3p - 4q + r - 2s + 1$ .*

A 2

B 3

C 4

D 5

14. 4 weeks 5 days – 6 days =

*4 minggu 5 hari – 6 hari =*

A 3 weeks 2 days

*3 minggu 2 hari*

B 3 weeks 4 days

*3 minggu 4 hari*

C 3 weeks 6 days

*3 minggu 6 hari*

D 4 weeks 1 days

*4 minggu 1 hari*

15. Which of the following is equal to 2.75 kg?

*Antara berikut, yang manakah sama dengan 2.75 kg?*

A 0.0275 tonne

*0.0275 ton*

B 275 000 g

C 2 750 g

D 2 kg 75 g

16. In Diagram 3,  $DEF$  is a straight line and  $ED = EH$ .

*Dalam Rajah 3,  $DEF$  ialah satu garis lurus dan  $ED = EH$ .*

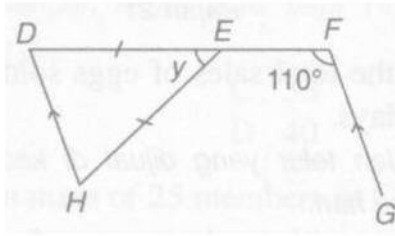


Diagram 3

*Rajah 3*

Find the value of  $y$ .

*Cari nilai bagi  $y$ .*

A  $35^\circ$

B  $40^\circ$

C  $45^\circ$

D  $50^\circ$

17. In Diagram 4,  $EFG$  is a straight line.

*Dalam Rajah 4,  $EFG$  ialah satu garis lurus.*

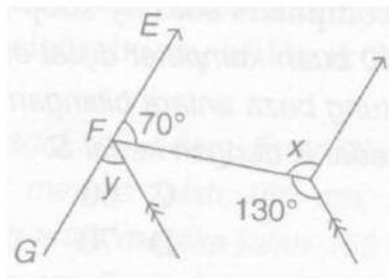


Diagram 4

*Rajah 4*

Find the value of  $x + y$ .

*Cari nilai bagi  $x + y$ .*

A  $160^\circ$

B  $170^\circ$

C  $180^\circ$

D  $200^\circ$



18. In Diagram 5,  $PQ$  and  $RS$  are parallel lines.  
*Dalam Rajah 5,  $PQ$  dan  $RS$  ialah garis selari.*

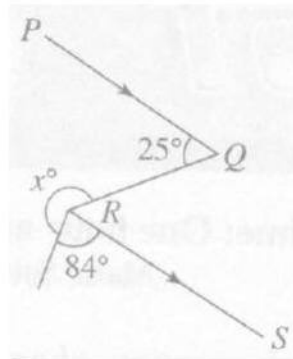


Diagram 5  
*Rajah 5*

Find the value of  $x$ .

*Cari nilai bagi  $x$ .*

- A  $151^\circ$   
B  $251^\circ$   
C  $276^\circ$   
D  $335^\circ$
19. Which of the following polygons has 7 vertices?  
*Antara berikut, poligon yang manakah mempunyai 7 bucu?*
- A Pentagon  
*Pentagon*  
B Heptagon  
*Heptagon*  
C Hexagon  
*Heksagon*  
D Octagon  
*Oktagon*

20. In Diagram 6,  $RSTV$  is a rectangle,  $PQRV$  is a parallelogram and  $UVT$  is a right-angled triangle.

Dalam Rajah 6,  $RSTV$  adalah sebuah segi empat tepat,  $PQRV$  ialah sebuah segi empat selari dan  $UVT$  ialah sebuah segi tiga bersudut tegak.

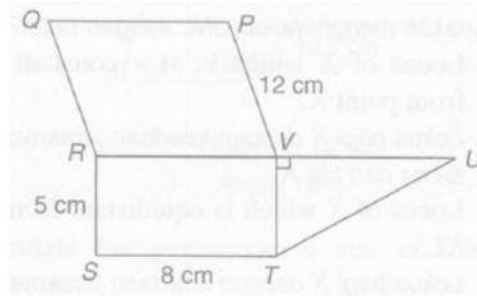


Diagram 6

Rajah 6

Given  $PV = VU$ ,  $TU = 13$  cm, calculate the perimeter, in cm, of the whole diagram.

Diberi  $PV = VU$ ,  $TU = 13$  cm, hitung perimeter, dalam cm, seluruh rajah itu.

- A 70  
B 75  
C 83  
D 95
21. Diagram 7 shows a trapezium.

Rajah 7 menunjukkan sebuah trapezium.

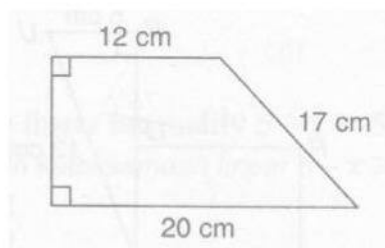


Diagram 7

Rajah 7

Calculate the area, in  $\text{cm}^2$ , of the trapezium.

Hitung luas, dalam  $\text{cm}^2$ , bagi trapezium itu.

- A 320  
B 290  
C 272  
D 240

22. A matchbox contains 55 matchsticks. How many matchsticks are there in 82 matchboxes?

*Sekotak mancis berisi dengan 55 batang mancis. Berapakah bilangan mancis yang ada di dalam 82 buah kotak mancis?*

- A 4 010
- B 4 400
- C 4 510
- D 8 020

23. Which of the following is a common factor of 10, 15 and 20?

*Antara berikut, yang manakah ialah faktor sepunya bagi 10, 15 dan 20?*

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

24.  $\frac{3}{4}$  of a piece of cloth is 93 m. find  $\frac{5}{8}$  of the length of the cloth.

*$\frac{3}{4}$  daripada sehelai kain ialah 93 m. Cari  $\frac{5}{8}$  daripada panjang kain itu.*

- A  $\frac{3}{4}$  m
- B  $49\frac{19}{32}$  m
- C  $77\frac{1}{2}$  m
- D  $99\frac{3}{16}$  m

25. Guna, who is working as a sales promoter gets RM572.40 as his salary for six working days. Find his daily salary.

*Guna bekerja sebagai promoter mendapat RM572.40 sebagai gajinya untuk enam hari bekerja. Cari gaji hariannya.*

- A RM47.70
- B RM71.55
- C RM80.77
- D RM95.40

26. Calculate the percentage decrease if 750 is decreased to 300.

*Hitung peratus susutan apabila 750 dikurangkan kepada 300.*

A 30%

B 60%

C 75%

D 80%

27. Which of the following has the largest value?

*Antara berikut, yang manakah mempunyai nilai yang terbesar?*

A  $-10 - (-8)$

B  $-14 + (-9)$

C  $12 + (-10)$

D  $15 - (+6)$

28. In Diagram 8, the reading of the balance is not accurate.

*Dalam Rajah 8, bacaan penimbang adalah tidak tepat.*

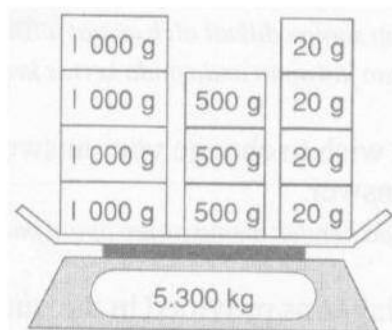


Diagram 8

*Rajah 8*

Find the difference between the reading and the actual mass in kg.

*Cari beza antara bacaan itu dengan jisim sebenar dalam kg.*

A 1.78

B 1.28

C 0.78

D 0.28

29. Ahmad is 6 kg heavier than Julia. Given that Julia's mass is  $x$  kg, form an algebraic expression for Ahmad's mass, in kg.

*Jisim Ahmad ialah 6 kg lebih berat daripada jisim Julia. Diberi jisim Julia ialah  $x$  kg. tulis satu ungkapan algebra bagi jisim Ahmad, dalam kg.*

- A  $x + 6$
- B  $x - 6$
- C  $6x$
- D  $\frac{6}{x}$

30. The length and width of a rectangle are  $2h$  cm and  $h$  cm respectively. Find the perimeter of the rectangle in cm.

*Panjang dan lebar sebuah segi empat tepat adalah  $2h$  cm dan  $h$  cm masing-masing. Hitung perimeter bagi segi empat tepat tersebut dalam cm.*

- A  $2h$
- B  $3h$
- C  $4h$
- D  $6h$

31. An express bus started from Seremban to Butterworth at 4.45 p.m. The journey took 4 hours 50 minutes. At what time, in the 24-hour system, did the bus arrive in Butterworth?

*Sebuah bas ekspres bertolak dari Seremban ke Butterworth pada pukul 4.45 p.m. Perjalanan itu mengambil masa 4 jam 50 minit. Pada pukul berapakah, dalam sistem 24-jam, bas itu sampai di Butterworth?*

- A 2135 hours

*Jam 2135*

- B 2155 hours

*Jam 2155*

- C 2225 hours

*Jam 2225*

- D 2305 hours

*Jam 2305*

32. Diagram 9 shows the straight line,  $KL$  and  $MN$ . What is the value of  $x$ ?  
*Rajah 9 menunjukkan garis lurus  $KL$  dan  $MN$ . Apakah nilai bagi  $x$ ?*

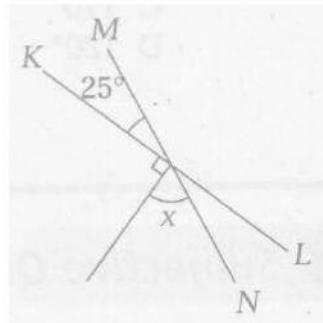


Diagram 9  
*Rajah 9*

- A  $x = 40^\circ$   
B  $x = 65^\circ$   
C  $x = 155^\circ$   
D  $x = 245^\circ$
33. In Diagram 10,  $PUT$  is a straight line. What is the value of  $x$ ?  
*Dalam Rajah 10,  $PUT$  ialah satu garis lurus. Apakah nilai  $x$ ?*

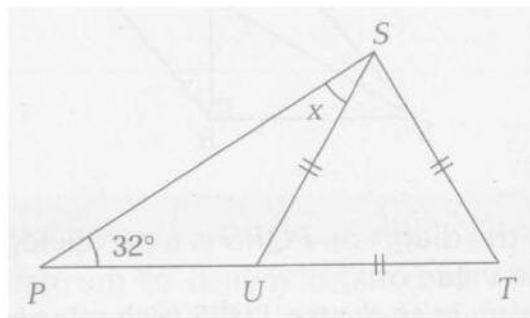


Diagram 10  
*Rajah 10*

- A  $18^\circ$   
B  $28^\circ$   
C  $38^\circ$   
D  $48^\circ$

34. In Diagram 11,  $KLMN$  is a square and  $KLP$  is a straight line.

*Dalam Rajah 11,  $KLMN$  ialah sebuah segi empat sama dan  $KLP$  ialah garis lurus.*

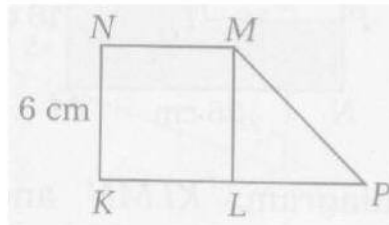


Diagram 11

*Rajah 11*

Given  $L$  is the midpoint of  $KP$ . Calculate the area, in  $\text{cm}^2$ , of the whole diagram.

*Diberi  $L$  ialah titik tengah bagi  $KP$ . Hitung luas, dalam  $\text{cm}^2$ , bagi seluruh rajah itu.*

A 36

B 54

C 68

D 72

35. Diagram 12 shows a cuboid and a cube.

*Rajah 12 menunjukkan sebuah kuboid dan sebuah kubus.*

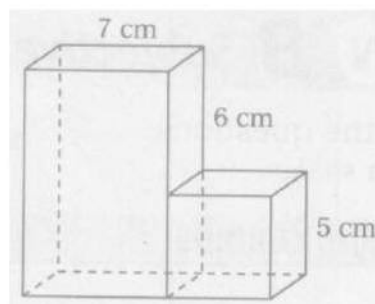


Diagram 12

*Rajah 12*

Calculate the volume, in  $\text{cm}^3$ , of the solid.

*Cari isipadu, dalam  $\text{cm}^3$ , bagi pepejal itu.*

A 545

B 510

C 335

D 320

36. A broker charges 1.5% commission on the price for each house sold. If he sells a house for RM 250 000, calculate his commission.

*Seorang agen mengenakan 1.5% komisen ke atas setiap rumah yang dijualnya. Jika dia menjual sebuah rumah yang berharga RM 250 000, hitung komisennya.*

- A RM 1 500
- B RM 2 515
- C RM 3 500
- D RM 3 750

37. Diagram 13 shows that  $PRU$ ,  $PQT$ , and  $RQS$  are straight lines.

*Rajah 13 menunjukkan  $PRU$ ,  $PQT$ , dan  $RQS$  adalah garis lurus.*

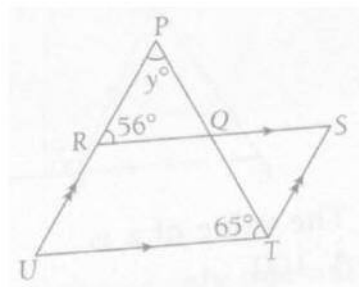


Diagram 13

*Rajah 13*

Find the value of  $y$ .

*Cari nilai  $y$ .*

- A 56
- B 59
- C 66
- D 68



38. In the Diagram 14,  $LMT$  is an equilateral triangle,  $KLMN$  and  $NPRQ$  are rectangles.

*Dalam Rajah 14,  $LMT$  ialah sebuah segi tiga sama sisi,  $KLMN$  dan  $NPRQ$  ialah segi empat tepat.*

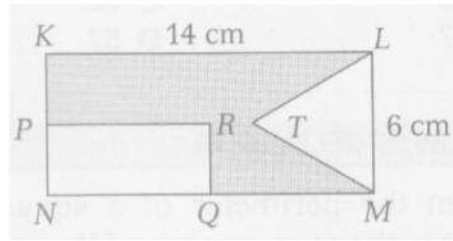


Diagram 14

*Rajah 14*

Given  $P$  and  $Q$  are the midpoints of  $KN$  and  $NM$  respectively. Find the perimeter, in cm, of the shaded region.

*Diberi  $P$  dan  $Q$  masing-masing ialah titik tengah bagi  $KN$  dan  $NM$ . Cari perimeter, dalam cm, bagi kawasan yang berlorek.*

- A 56
- B 46
- C 44
- D 40

39. In Diagram 15,  $PQRS$  is a trapezium.

*Dalam Rajah 15,  $PQRS$  ialah sebuah trapexium.*

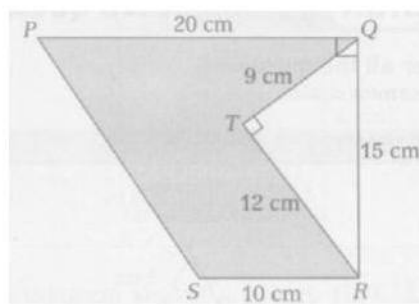


Diagram 15

*Rajah 15*

Find the area, in  $\text{cm}^2$ , of the shaded region.

*Cari luas, dalam  $\text{cm}^2$ , bagi kawasan yang berlorek.*

- A 171
- B 168
- C 117
- D 104

40. A container is 5 m in length, 3 m in breadth and 4 m in height. It is full of water. The water is transferred into small cubic containers of side 50 cm. How many small containers are needed?

*Sebuah bekas mempunyai panjang 5 m, lebar 3 m dan tinggi 4 m. Bekas itu dipenuhi dengan air. Air itu dipindahkan kepada bekas kecil yang berbentuk kubus dengan tepi 50 cm. Berapakah bilangan bekas kecil yang diperlukan?*

- A 576
- B 480
- C 392
- D 14

**Instruction:** This paper consists of **20** questions. Answer **all** questions. Write your answers clearly in the spaces provided in the question paper.

**Arahan :** Kertas ini mengandungi **20** soalan. Jawab **semua** soalan. Tulis jawapan anda dengan jelas dalam ruang yang disediakan dalam kertas soalan.

1. a) Round off 243 518 to the nearest thousand.

*Bundarkan 243 518 kepada ribu yang terdekat.*

- b) Find the value of  $72 \div 4 \times 3 - 12$

*Cari nilai  $72 \div 4 \times 3 - 12$*

[ 2 marks ]

[ 2 markah ]

1

2

2. a) Find the highest common factor of 36 and 60.

*Cari faktor sepunya terbesar bagi 36 dan 60.*

- b) Find the sum of all the prime factors of 35.

*Cari hasil tambah semua faktor perdana bagi 35.*

[ 3 marks ]

[ 3 markah ]

2

3

3. Calculate the value of  $2\frac{3}{8} + 1\frac{1}{6} - 2\frac{3}{4}$  and express your answer as a fraction in the simplest form.

[ 3 marks ]

*Hitung nilai bagi  $2\frac{3}{8} + 1\frac{1}{6} - 2\frac{3}{4}$  dan ungkapkan jawapan anda sebagai pecahan dalam bentuk termudah.*

[ 3 markah ]

3

3

4. During an election, 80% of the 65 000 voters in a constituency voted. Find the number of voters who did not vote.

[ 3 marks ]

*Semasa satu pilihanraya, 80% daripada 65 000 orang pengundi yang berdaftar keluar mengundi. Cari bilangan pengundi yang tidak keluar mengundi.*

[ 3 markah ]

4

3

5. Simplify the following  
*Permudahkan yang berikut*

[ 3 marks ]  
[ 3 markah ]

- a)  $8x - 9 - 3x + 7$   
b)  $12 - k - (8 - 3k)$

5

3

6. The flight from KLIA to Sandakan usually takes 1 hour 50 minutes. If a flight scheduled to depart KLIA at 7.45 p.m. is delayed by  $\frac{1}{2}$  hour, at what time will the plane arrive in Sandakan. ( Give your answer in the 24-hour system)

[ 3 marks ]

*Penerbangan dari KLIA ke Sandakan kebiasaannya mengambil masa selama 1 jam 50 minit. Jika satu penerbangan yang dijadualkan berlepas dari KLIA pada pukul 7.45 p.m. telah ditangguhkan selama  $\frac{1}{2}$  jam, pada pukul berapakah kapal terbang itu tiba di Sandakan? (Beri jawapan anda dalam system 24 jam)*

[ 3 markah ]

6

3

7. A packet of biscuits weighs 420 g. William buys 9 packets of the biscuits. Calculate the total mass, in kg, of the biscuits bought.

[ 3 marks ]

*Jisim sepeket biskut ialah 420 g. William membeli 9 pekuk biskut itu. Hitung jumlah jisim, dalam kg, biskut yang dibelinya.*

[ 3 markah ]

7

3

8. Rearrange the following mixed numbers  $2\frac{1}{2}$ ,  $2\frac{4}{5}$ ,  $2\frac{3}{4}$ ,  $2\frac{5}{7}$  and  $2\frac{2}{3}$  in decreasing order.

[ 2 marks ]

*Susun semula nombor-nombor bercampur  $2\frac{1}{2}$ ,  $2\frac{4}{5}$ ,  $2\frac{3}{4}$ ,  $2\frac{5}{7}$  and  $2\frac{2}{3}$  dalam tertib menurun.*

[ 2 markah ]

8

2

9. Calculate the value of  $\frac{35}{100} + \frac{17}{10} - \frac{3}{10}$  and express your answer as a decimal.

[ 2 marks ]

Hitung nilai bagi  $\frac{35}{100} + \frac{17}{10} - \frac{3}{10}$  dan ungkapkan jawapan anda sebagai perpuluhan.

[2 markah]

9

2

10. Diagram 1 below shows a number line.

Rajah 1 di bawah menunjukkan satu garis nombor.

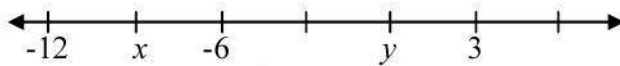


Diagram 1

Rajah 1

Find the value of  $2x + y$

[ 3 marks ]

Cari nilai bagi  $2x + y$

[ 3 markah ]

10

3

11. In Diagram 2, JKLM is a straight line.

Dalam Rajah 2, JKLM ialah garis lurus.

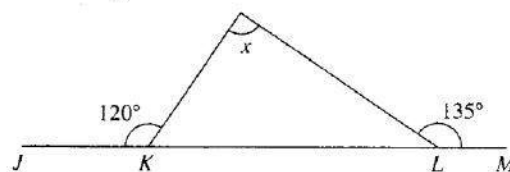


Diagram 2

Rajah 2

Find the value of  $x$ .

[ 3 marks ]

Cari nilai  $x$ .

[ 3 marks ]

11

3

12. Complete the shape in Diagram 3 using PQ as the line of symmetry.

[ 2 marks ]

Lengkapkan bentuk di dalam Rajah 3 dengan menggunakan garisan PQ sebagai garis simetri.

[ 2 markah ]

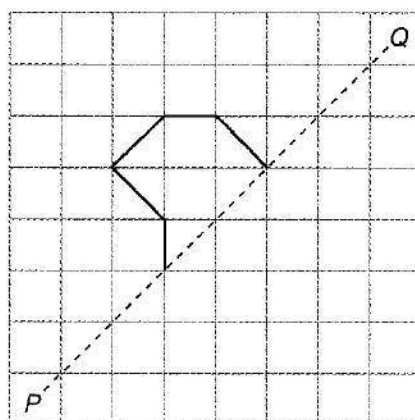
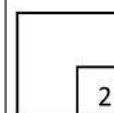


Diagram 3  
Rajah 3

12



13. In Diagram 4, PR and TU are two straight lines. Find the value of  $x$ . [ 2 marks ]

Dalam Rajah 4, PR dan TU adalah garis lurus. Cari nilai  $x$ .

[ 2 markah ]

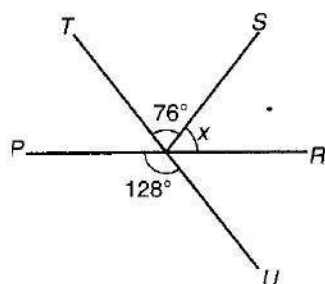
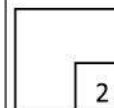


Diagram 4  
Rajah 4

13



14. In Diagram 5, PST and RSU are straight lines. Given that  $SU = UT$ , find the value of  $x$  and  $y$ . [ 4 marks ]

Dalam Rajah 5, PST dan RSU adalah garis lurus. Diberi  $SU = UT$ , cari nilai bagi  $x$  dan  $y$ .

[ 4 markah ]

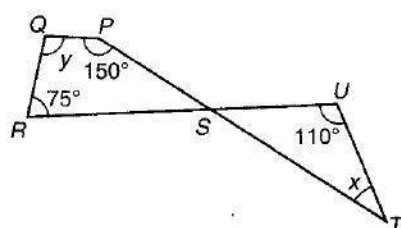
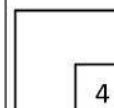


Diagram 5  
Rajah 5

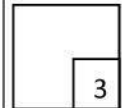
14



15. Given that the length of a rectangle is 3 cm longer than its breadth and its perimeter is 38 cm, find the length, in cm, of the rectangle. [ 3 marks ]

*Diberi bahawa panjang bagi sebuah segi empat tepat adalah 3 cm lebih daripada lebarnya dan perimeternya ialah 38 cm, cari panjang, dalam cm, segi empat tepat itu. [ 3 markah ]*

15



16. In Diagram 6, ABC is a straight line. Given the area of  $\triangle BCD$  is  $16 \text{ cm}^2$ , find

*Dalam Rajah 6, ABC adalah satu garis lurus. Diberi luas  $\triangle BCD$  adalah  $16 \text{ cm}^2$ , cari*

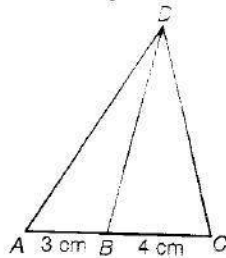


Diagram 6

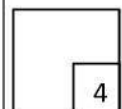
*Rajah 6*

- a) The height of  $\triangle BCD$   
*Tinggi bagi  $\triangle BCD$*   
 b) The area of  $\triangle ABD$   
*Luas  $\triangle ABD$*

[ 4 marks ]

[ 4 markah ]

16



17. In Diagram 7, PQRS is a trapezium and RSTU is a square. Given  $ST = TP$ , find the area of the shaded region. [ 4 marks ]

*Dalam Rajah 7, PQRS adalah trapezium dan RSTU adalah segi empat sama. Diberi  $ST = TP$ , cari luas kawasan yang berlorek. [4 markah]*

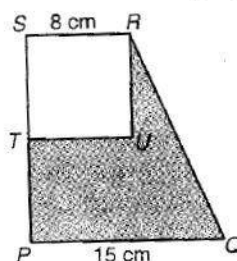
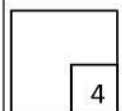


Diagram 7

*Rajah 7*

17



18. Diagram 8 consists of a rectangle and a trapezium.

*Rajah 8 terdiri daripada sebuah segi empat tepat dan sebuah trapezium.*

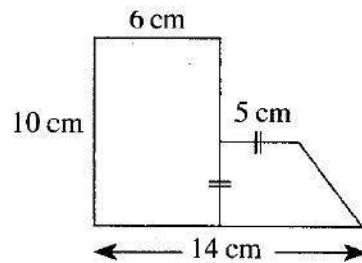


Diagram 8

*Rajah 8*

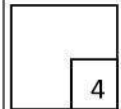
Calculate the total area, in  $\text{cm}^2$ , of the whole diagram.

[ 4 marks ]

*Hitung jumlah luas, dalam  $\text{cm}^2$ , seluruh rajah itu.*

[ 4 markah ]

18



19. Diagram 9 shows a rectangular block of wood with a volume of  $240\,000\text{ cm}^3$ .

Find the value of  $x$ .

[ 3 marks ]

*Rajah 9 menunjukkan blok kayu segi empat tepat dengan isipadu  $240\,000\text{ cm}^3$ . Cari nilai  $x$ .*

[ 3 markah ]

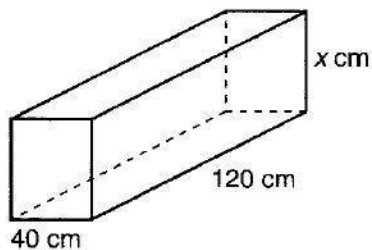
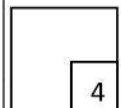


Diagram 9

*Rajah 9*

19





20. Diagram 10 shows a cube and a cuboid.  
*Rajah 10 menunjukkan sebuah kubus dan sebuah kuboid.*

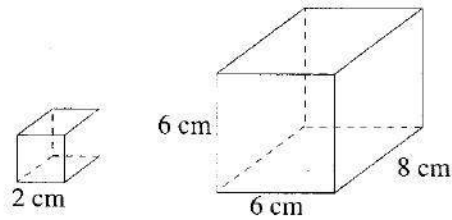
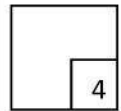


Diagram 10  
*Rajah 10*

How many cubes can be put into the cuboid? [ 4 marks ]  
*Berapakah bilangan kubus yang boleh dimasukkan ke dalam kuboid itu? [ 4 markah ]*

20



- END OF QUESTIONS -

**ANSWER SCHEME FOR MATHEMATICS PAPER 1  
FORM 1 FINAL EXAM 2011**

1	C	11	C	21	C	31	A
2	C	12	A	22	C	32	B
3	C	13	D	23	A	33	B
4	C	14	C	24	C	34	B
5	D	15	C	25	D	35	B
6	B	16	B	26	B	36	D
7	D	17	B	27	D	37	B
8	B	18	B	28	D	38	B
9	B	19	B	29	A	39	A
10	B	20	A	30	D	40	B

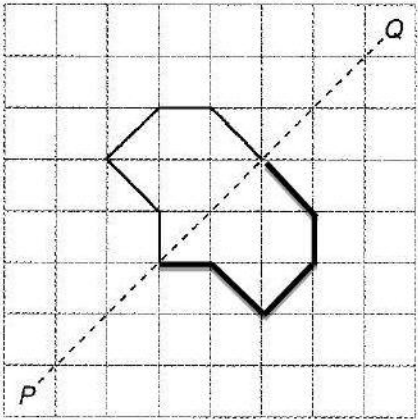

**ANSWER SCHEME**

**FINAL YEAR EXAMINATION 2011**

**MATHEMATICS 2 FORM 1**

NO	ANSWER	MARKS	FULL MARKS												
1.	<p>(a) 244 000</p> <p>(b) <math>72 \div 4 \times 3 - 12</math> <math>= 18 \times 3 - 12</math> <math>= 54 - 12</math> <math>= 42</math></p>	<p>1</p> <p>1</p>	2												
2.	<p>(a) HCF of 36 and 60 Factors of 36: 1,2,3,4,9,12,18,36 Factors of 60: 1,2,3,4,5,6,10,12,15,20,30,60 Common factors: 1,2,3,4,12 HCF of 36 and 60: 12 @ HCF of 36 and 60</p> <table><tr><td>2</td><td>36</td><td>60</td></tr><tr><td>2</td><td>18</td><td>30</td></tr><tr><td>3</td><td>9</td><td>15</td></tr><tr><td></td><td>3</td><td>5</td></tr></table> <p>HCF = <math>2 \times 2 \times 3</math> <math>= 12</math></p> <p>(b) Factors of 35 = 1, 5, 7, 35 Prime factors of 35 = 5, 7 Sum of prime factors = <math>5 + 7</math> <math>= 12</math></p>	2	36	60	2	18	30	3	9	15		3	5	<p>1</p> <p>@</p> <p>1</p> <p>1</p> <p>1</p>	3
2	36	60													
2	18	30													
3	9	15													
	3	5													
3.	$2\frac{3}{8} + 1\frac{1}{6} - 2\frac{3}{4}$ $= 2\frac{18}{48} + 1\frac{8}{48} - 2\frac{36}{48}$ $= 3\frac{26}{48} - 2\frac{36}{48}$ $= \left(2\frac{48}{48} + \frac{26}{48}\right) - 2\frac{36}{48}$ $= 2\frac{74}{48} - 2\frac{36}{48}$ $= \frac{38}{48}$ $= \frac{19}{24}$	<p>1</p> <p>1</p> <p>1</p>	3												

4.	$\text{Constituency voted} = \frac{80}{100} \times 65\,000$ $= 52\,000 \text{ voters}$ $\text{Voters who did not vote} = 65\,000 - 52\,000$ $= 13\,000 \text{ voters}$	1 1 1	3
5.	<p>(a) <math>8x - 9 - 3x + 7</math></p> $= 8x - 3x - 9 + 7$ $= 5x - 2$ <p>(b) <math>12 - k - (8 - 3k)</math></p> $= 12 - k - 8 + 3k$ $= 12 - 8 - k + 3k$ $= 4 + 2k$	1  1 1	3
6.	$7.45 \text{ p.m.} + \frac{1}{2} \text{ hour} + 1 \text{ hour } 50 \text{ minutes}$ $= 1945 + \frac{1}{2} \text{ hour} + 1 \text{ hour } 50 \text{ minutes}$ $= 2015 + 1 \text{ hour } 50 \text{ minutes}$ $= 2205$	1 1 1	3
7.	$420 \text{ g} \times 9 = 3780 \text{ g}$ <p>Change to kg</p> $3780 \div 1000$ $= 3.78 \text{ kg}$	1  1 1	3
8.	$2\frac{4}{5}, 2\frac{3}{4}, 2\frac{5}{7}, 2\frac{2}{3}, 2\frac{1}{2}$	2	2
9.	$\frac{35}{100} + \frac{17}{10} - \frac{3}{10}$ $= 0.35 + 1.7 - 0.3$ $= 2.05 - 0.3$ $= 1.75$	1 1	2
10.	$x = -9$ $y = 0$ $2x + y = 2(-9) + 0$ $= -18$	1 1 1	3
11.	$X = 180^\circ - 60^\circ - 45^\circ$ $= 75^\circ$	1 1	3

12.		2	2
13.	<p>Opposite angle, <math>\angle TR = \angle PU</math></p> $X + 76^\circ = 128^\circ$ $X = 128^\circ - 76^\circ$ $= 52^\circ$	1 1	2
14.	$x = \frac{180^\circ - 110^\circ}{2}$ $= \frac{70^\circ}{2}$ $= 35^\circ$ $y = 360^\circ - 150^\circ - 75^\circ - 35^\circ$ $= 100^\circ$	1  1 1 1	4
15.	<p> <math>3 + x</math>    <math>x</math>  <math>3 + x</math> </p> <p>Perimeter,  <math>3 + x + x + 3 + x + x = 38</math>  <math>6 + 4x = 38</math>  <math>4x = 32</math>  <math>x = 8</math></p> <p>Length of the rectangle = <math>3 + x</math>  <math>= 3 + 8</math>  <math>= 11 \text{ cm}</math></p>	1  1  1	3
16.	<p>(a) height of <math>\triangle BCD</math>,</p> $\frac{1}{2} \times 4 \times h = 16$ $2h = 16$ $h = 8 \text{ cm}$ <p>(b) area of <math>\triangle ABD = \frac{1}{2} \times 3 \times 8</math>  <math>= 12 \text{ cm}^2</math></p>	1 1 1 1	4

17.	Area of trapezium – area of square $= \left[ \frac{1}{2} \times (8 + 15) \times 16 \right] - (8 \times 8)$ $= \left[ \frac{1}{2} \times 23 \times 16 \right] - 64$ $= 184 - 64$ $= 120 \text{ cm}^2$	1  1  1 1	4
18.	Area of rectangle + area of trapezium $= (6 \times 10) + \left[ \frac{1}{2} \times (5 + 8) \times 5 \right]$ $= 60 + 32\frac{1}{2}$ $= 92\frac{1}{2} @ 92.5 \text{ cm}^2$	2 1 1 1	4
19.	$40 \times 120 \times x = 240\,000$  $48\,000 \times x = 240\,000$  $x = \frac{240\,000}{48\,000}$  $x = 5 \text{ cm}$	1    1  1	3
20.	Volume of cube = $2 \times 2 \times 2$ $= 8 \text{ cm}^3$ Volume of cuboid = $6 \times 6 \times 8$ $= 288 \text{ cm}^3$ Cubes can be put into the cuboid = $288 \div 8$ $= 36 \text{ cubes}$	1  1 1 1	4
<b>TOTAL</b>		<b>60</b>	