2020 PRIMARY 6 – PRELIMINARY EXAMINATION

Name: _____ ( ) Date: 20 August 2020

Class: Primary 6 ( ) Time: 8.00 a.m. - 9.00 a.m.

Paper 1 comprises 2 booklets, A and B.

MATHEMATICS
PAPER 1
(BOOKLET A)

20

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided.
6. You are **not** allowed to use a calculator.

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer.
Make your choice (1, 2, 3 or 4).
Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet. (20 marks)

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1. Farmer Brown harvested 109 436 oranges last year.
Express this number to the *nearest hundred thousand.*

(1) 100 000
(2) 109 000
(3) 110 000
(4) 109 400

2. $20 + \frac{7}{10} + \frac{7}{1000} =$ _____.

(1) 20.007
(2) 20.077
(3) 20.707
(4) 20.770

3. There are 70 adults and children in a hall. 56 are adults. What is the ratio of the number of children to the total number of people in the hall?

(1) 1 : 4
(2) 1 : 5
(3) 4 : 1
(4) 4 : 5

4. $3 : 9 = 4 : \square$

What is the missing number in the box?

(1) 10

(2) 12

(3) 27

(4) 36

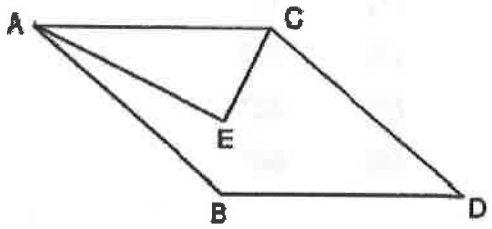
5. Which two lines in the figure are perpendicular to each other?

(1) AC and CD

(2) AB and CD

(3) AE and CE

(4) AC and BD



6. My teacher paid $25 for 50 notepads. How much did each notepad cost?

(1) 5 cents

(2) 2 cents

(3) 50 cents

(4) 20 cents

7. Round each of the numbers to the nearest whole number.

What is the estimated value?

32.6 + 40.4 x 9.51

(1) 430

(2) 433

(3) 700

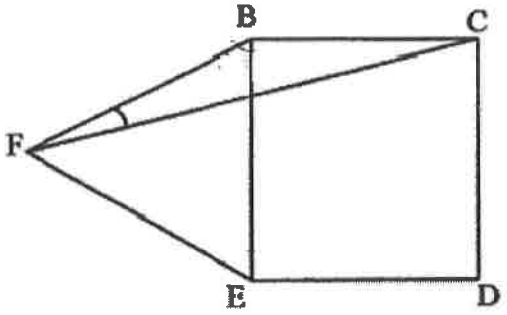
(4) 730

8. Find the perimeter of the semicircle. (*Take* $\pi = \frac{22}{7}$)

(1) 22 cm
(2) 36 cm
(3) 44 cm
(4) 58 cm

9. In the figure, BCDE is a square and BEF is an equilateral triangle.
Find ∠BFC.

(1) 15°
(2) 30°
(3) 45°
(4) 60°

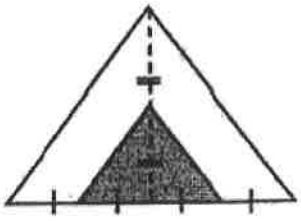


10. The mass of Box A is 6 kg. The total mass of Box B and Box C is also 6 kg.
What is the average mass of the 3 boxes?

(1) 6 kg
(2) 2 kg
(3) 3 kg
(4) 4 kg

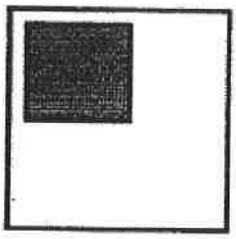
11. What percentage of the triangle is unshaded?

(1) 25%
(2) 40%
(3) 50%
(4) 75%



12. A small square is placed over a large square. The length of each square is a whole number. The area of the large square that is not covered by the small square is 56 cm². What is the perimeter of the large square?

(1) 44 cm
(2) 40 cm
(3) 36 cm
(4) 20 cm



13. A wire is cut into 2 pieces. One piece is made into an equilateral triangle of sides y cm long. The other piece is made into a square of sides 8 cm long. What is the length of the wire before it is cut?

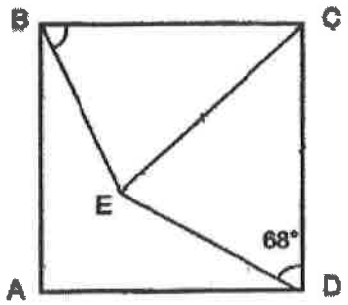
(1) $(y + 8)$ cm
(2) $(3y + 64)$ cm
(3) $(3y + 32)$ cm
(4) $(4y + 24)$ cm

14. A supermarket gave a discount of $3 for every $40 spent.
Mr Lim bought some groceries and paid $119.
What was the price of the groceries before the discount?

(1) $125
(2) $128
(3) $141
(4) $156

15. In the figure, ABCD is a square, CE = CD and ∠EDC = 68°.
Find ∠CBE.

(1) 44°
(2) 46°
(3) 67°
(4) 68°



End of Booklet A

Go on to Booklet B

2020 PRIMARY 6 – PRELIMINARY EXAMINATION

Name: _____ ( ) Date: 20 August 2020

Class: Primary 6 ( ) Time: 8.00 a.m. - 9.00 a.m.

Parent's Signature: _____

Paper 1 comprises 2 booklets, A and B.

MATHEMATICS
PAPER 1
(BOOKLET B)

25

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet.
6. You are **not** allowed to use a calculator.

Questions 16 to 20 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (5 marks)

16. Find the value of $40.04 \div 8$.

Ans: _____

17. Janet completed a race in 148 seconds.
She was 15 seconds slower than Stella.
How long did Stella take to complete the race?

Ans: _____ min _____ s

18. The table below shows the charges for a cleaning service.

First 2 hours	$100
Every additional hour	$30

Mdm Lee paid the shop $160 to clean her house.
How many hours of cleaning did she pay for?

Ans: _____ h

19. Express 0.5% as a fraction in the simplest form.

Ans: _____

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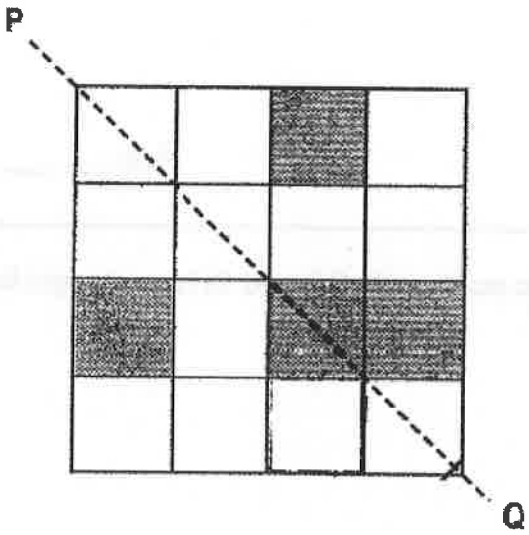
20. In the figure, PQ is the line of symmetry.
Shade a unit square to make the figure symmetrical.



Questions 21 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided.
For questions which require units, give your answers in the units stated. (20 marks)

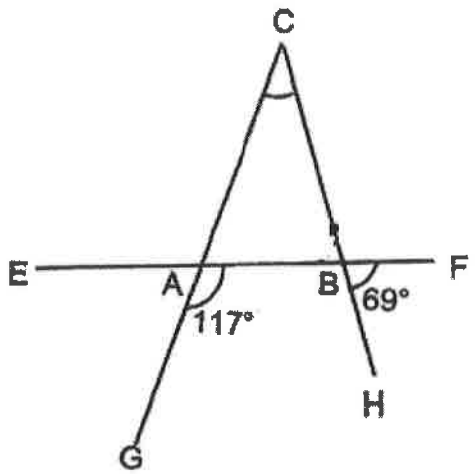
21. Alan is less than 50 years old. His age is a multiple of 5.
Next year, his age is a multiple of 7. How old is he now?

Ans: _____ years old

22. At a party, there were 25% more men than women. There were 180 adults at the party. How many men were there?

Ans: _____

23. The figure below is not drawn to scale. EF, CG and CH are straight lines.
∠GAB is 117° and ∠FBH is 69°.
Find ∠ACB.



Ans: _____ °

24. Sally had 2 boxes of beads. After transferring $\frac{1}{7}$ of the beads from Box A to Box B, the ratio of the number of beads in Box A to the number of beads in Box B becomes 3 : 7. What is the ratio of the number of beads in Box A to the number of beads in Box B at first?

Ans: _____

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25. 4 people can sit at a square table, one at each side of the table. 6 people can sit at two square tables joined together. How many tables are needed to form a long table for 50 people?

Ans: _____

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26. Alan spent $\frac{1}{3}$ of his pocket money on a shirt and 15% of the remainder on a book. What fraction of his allowance did he spend in all?

Ans: _____

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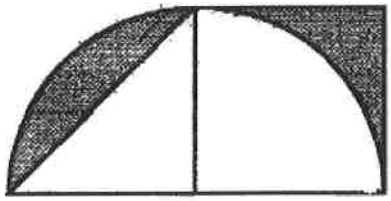
27. The figure is made up of a square and a semicircle.
Find the shaded area.



Ans: _____ cm^2

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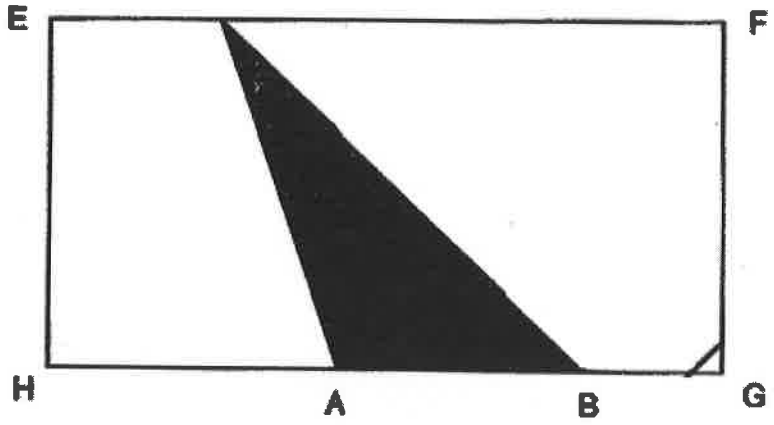
30 The length of HG is thrice the length of AB.

The shaded triangle is 13 cm². Find the area of Rectangle EFGH.



Ans: _____ cm²

End of Booklet B

End of Paper 1

2020 PRIMARY 6 – PRELIMINARY EXAMINATION

Name: _____ (Date: 20 August 2020

Class: Primary 6 ( ) Time: 10.30 a.m. - 12.00 noon

Parent's Signature: _____

MATHEMATICS
PAPER 2

55

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Show your working clearly as marks are awarded for correct working.
6. You are allowed to use a calculator.

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

1. What is the missing number in the box?

$140 \div 20 \times \square + (180 - 120) = 270.$

Ans: _____

2. $\frac{3}{5}$ of Lily's savings is equal to $\frac{7}{12}$ of Janet's savings.

What is the ratio of Janet's savings to Lily's savings?

Ans: _____

3. At first, Aaron and Ben were facing the same direction. Aaron then turned 225° clockwise to face North-West while Ben turned 90° clockwise.

What direction did Ben face in the end?

Ans: _____

4. Alice is 5v years old. Beatty is 18 years younger than Cally.
Alice is 2v years older than Beatty.
Find, in terms of v, the total age of the 3 children in 2 years' time.

Ans: _____ years old

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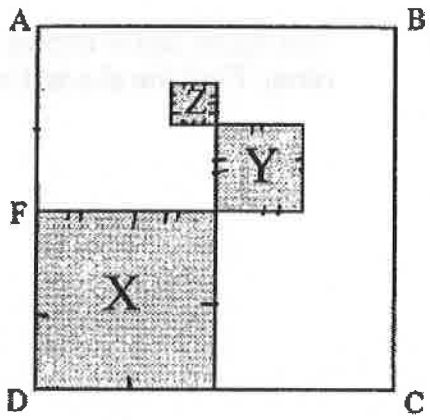
5. X, Y and Z are squares in the big square, ABCD. AF = FD.
The length of Y is half the length of X. The length of Y is twice the length of Z.
What fraction of the figure is shaded?



Ans: _____

For questions **6** to **17**, show your working clearly in the space provided for each question and write your answers in the spaces provided.
The number of marks available is shown in brackets [ ] at the end of each question or part-question. (45 marks)

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6. The length of AE is 3.3 m. B is the midpoint of AC. C is the midpoint of BD and D is the midpoint of BE. What is the length of DE in centimetres?

Ans: _____ [3]

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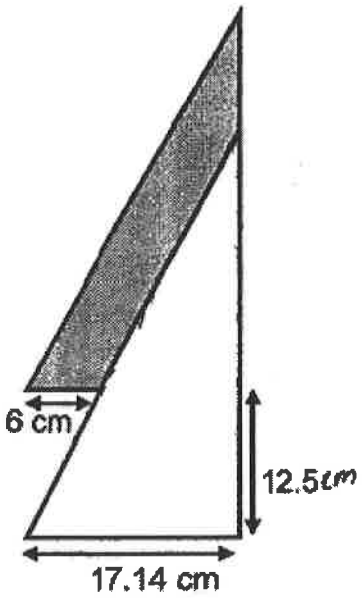
7. The figure below shows two identical right-angled triangles overlapping each other. Find the shaded area.



Ans: _____ [3]

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8. Denise bought 9 more 26-cent stickers than 32-cent stickers from an online shopping website. She spent a total of $12.78 on these stickers.
How many 26-cent stickers did Denise buy?

Ans: _____ [3]

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9. Mrs Lee went to a sale and paid a total of $600 for a watch and a necklace. The watch was sold to her at a 20% discount. The total discount given for these 2 items was $140. Mrs Lee paid $120 more for the necklace than the watch.
What was the original price of the necklace?

Ans: _____ [3]

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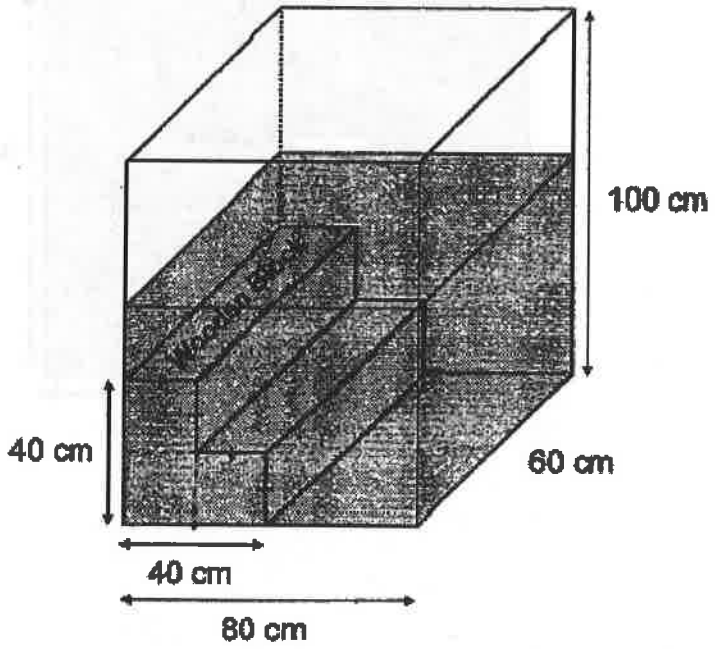
10 Frank had to make 200 toy cars. He made 8 toy cars each day from Monday to Friday and 15 each day on Saturday and Sunday. Starting on a Thursday, on which day of the week did Frank complete making all the toy cars?

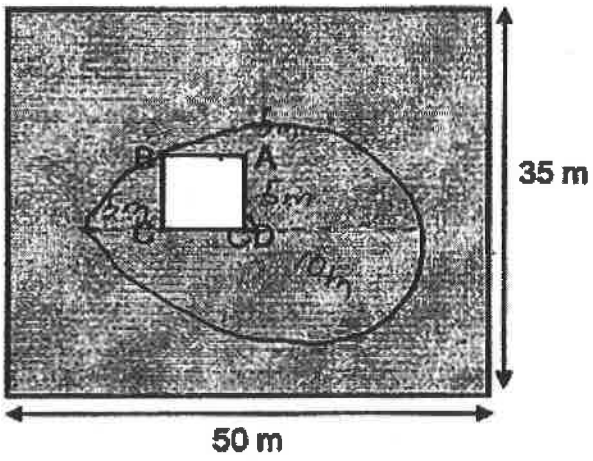
Ans: _____ [3]

11. The figure shows a rectangular aquarium. with no matter at first
It is ~~to be~~ then filled with water up to $\frac{3}{5}$ its height.
How many *litres* of water is needed?



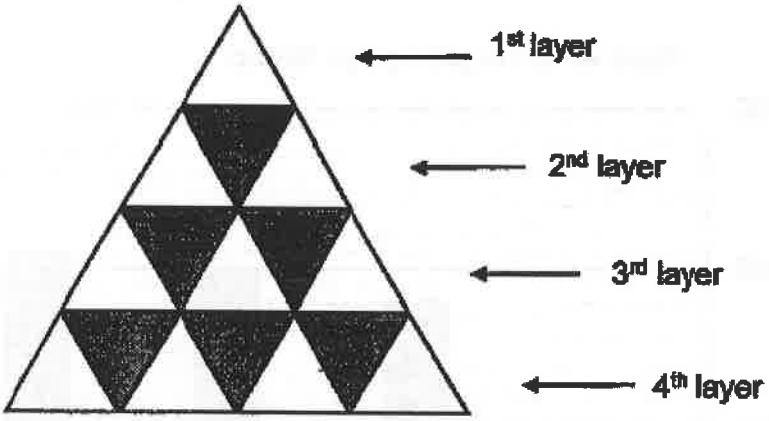
Ans: _____ [4]

12 ABCD is a 5 m by 5 m square house built in a field.
The field is 50 m long and 35 m wide. A dog is tied to Corner D of this house with a rope of length 10 m long.
Find the maximum area in the field that this dog can move within.
(Take $\pi = 3.14$)



Ans: _____ [4]

13. The figure is made up of identical triangles.



Study the above pattern carefully.

(a) How many triangles are there in the 10th layer ?

(b) How many shaded triangles are there in the 100th layer ?

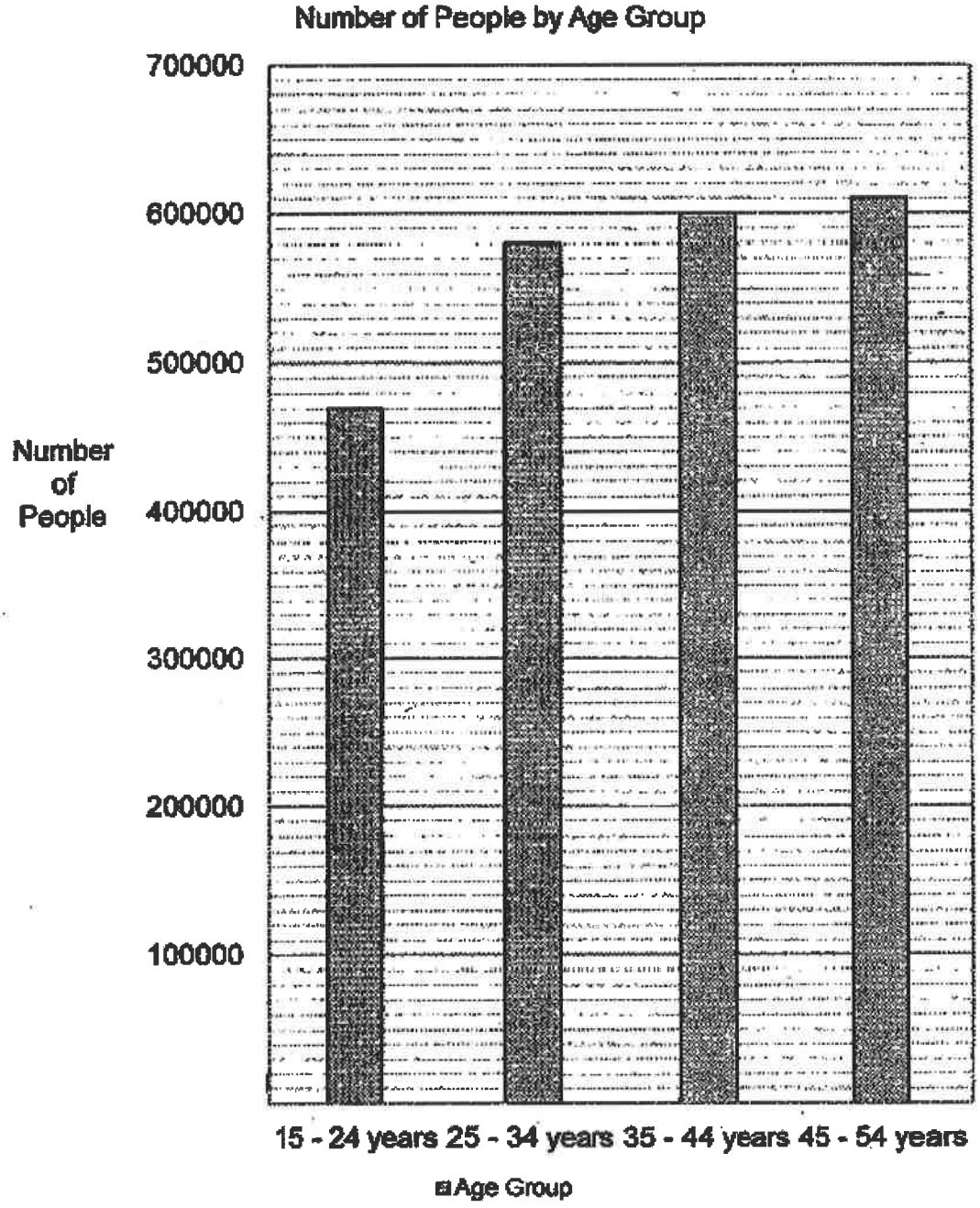
(c) In which layer will you find 109 triangles ?

Ans (a) _____ [1]

(b) _____ [1]

(c) _____ layer [2]

14. The bar graph shows the number of people in the different age groups.



The table below shows the percentage of people in the different age groups who are online food delivery users.

Age Group	15 – 24 years	25 – 34 years	35 – 44 years	45 – 54 years
Percentage of online food delivery users	18	31	26	17

(a) Which age group has the most number of people?

(b) Which age group has the least number of online food delivery users?

(c) The amount of money spent by online food delivery users aged 15 to 24 years old is $115 000 000. What is the average amount of money spent by each of the users in this age group?
Give your answer to the nearest whole number.

Ans: (a) ____ to ____ years old [1]

(b) ____ to ____ years old [1]

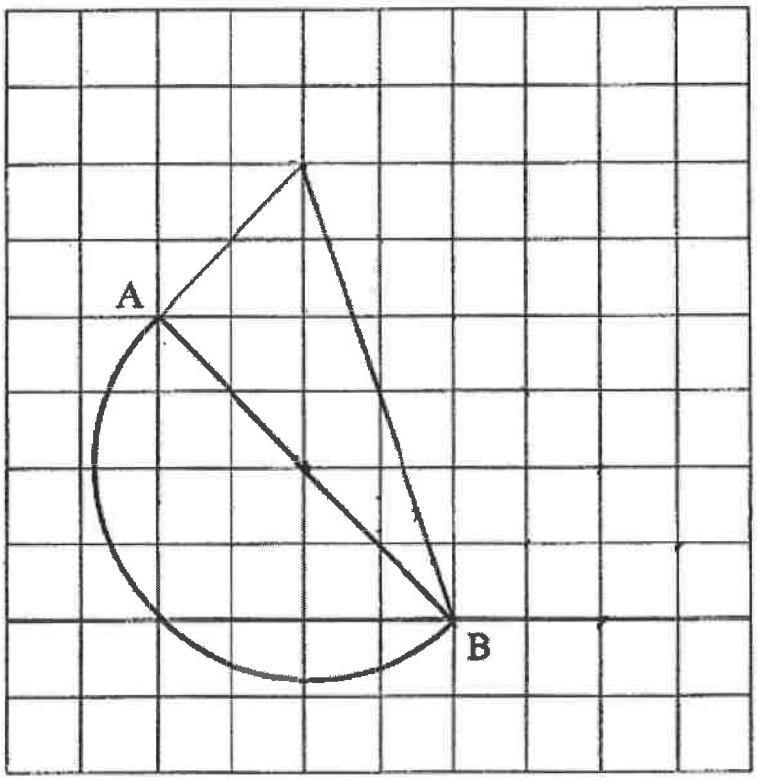
(c) _____ [2]

15. A semicircle is drawn on a square grid.

(a) Measure and write down the length of the radius of the semicircle.

(b) Draw a rectangle ABCD such that the length of BC is equal to the length of the radius.

(c) Join BD and measure ∠ABD

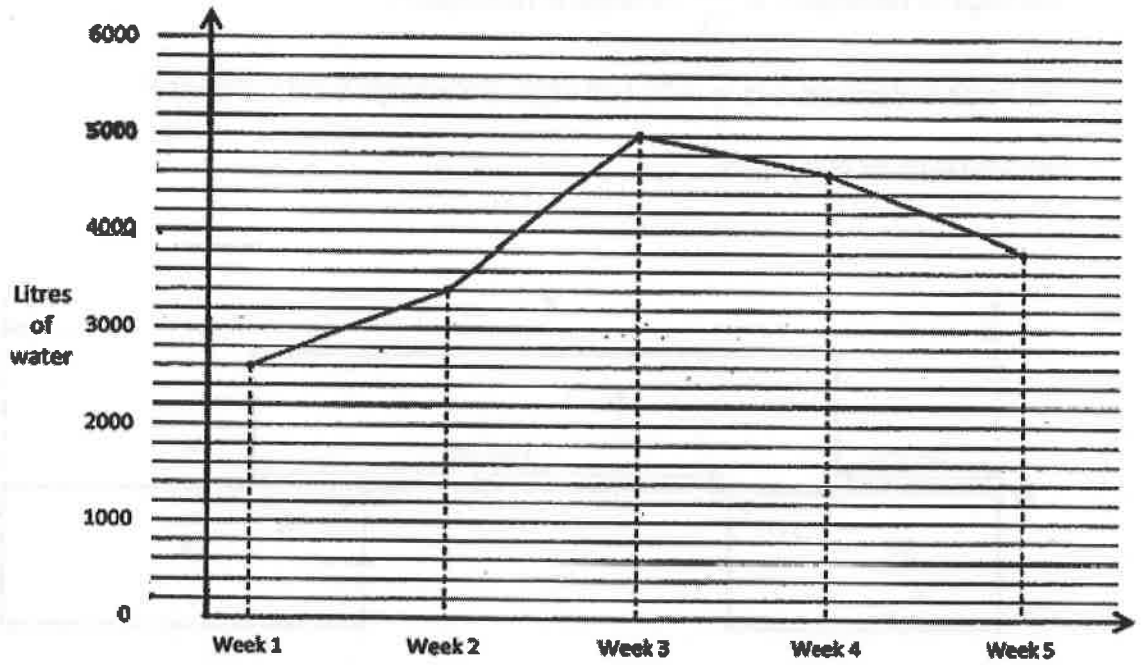


Ans: (a) Radius = _____ [1]

(b) *Drawing of Rectangle ABCD* [2]

(c) ∠ABD = _____ [1]

16. Mr and Mrs Tan lived with their four children in a 5-room flat.
The line graph showed the total water usage each week for Mr Tan's family.



(a) There was a sharp increase in water usage from Week ____ to Week ____.

(b) Find the average water usage for each week.

(c) Each statement below is either true, false or not possible to tell from the information given. For each statement, put a tick (✓) in the correct column. [2 marks]

	True	False	Not Possible to Tell
(i) The average water usage for each member in a week was 700 litres.			
(ii) The reason that the water usage increased from Week 1 to Week 2 was due to a leak in the water pipe.			

Ans : (a) Week ____ to Week ____ [1]

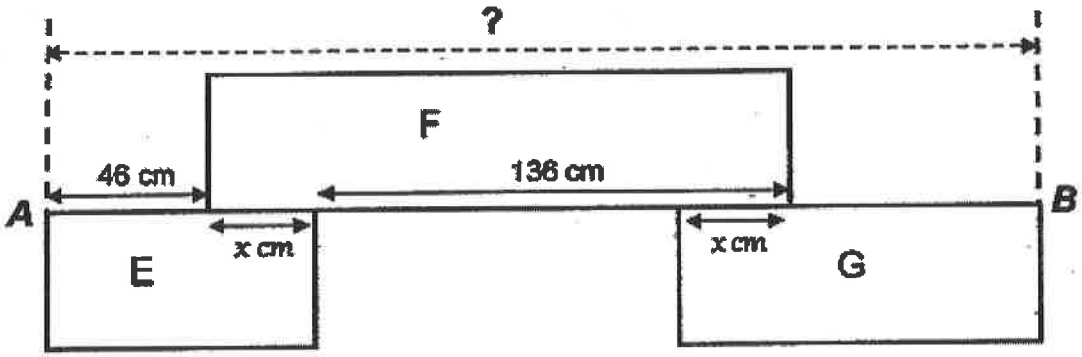
(b) _____ [2]

17. The figure below is made up of 3 different rectangles with identical breadth.

The length of Rectangle E is $\frac{5}{11}$ the length of Rectangle F.

The length of Rectangle G is $\frac{1}{2}$ of the total length of Rectangle E and Rectangle F.

Find the length AB of the figure.



Ans: _____ [5]

End of Paper 2

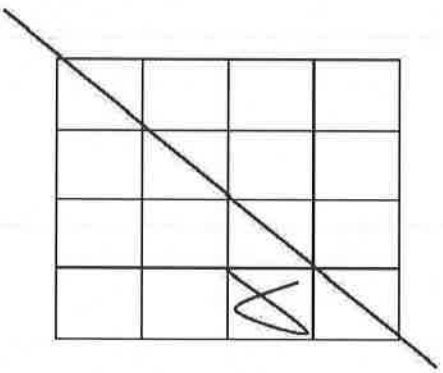
SCHOOL : TAO NAN PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2020 PRELIM

PAPER 1 BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	3	2	2	3	3	2	2	1	4

Q 11	Q12	Q13	Q14	Q15
4	3	3	2	3

PAPER 1 BOOKLET B

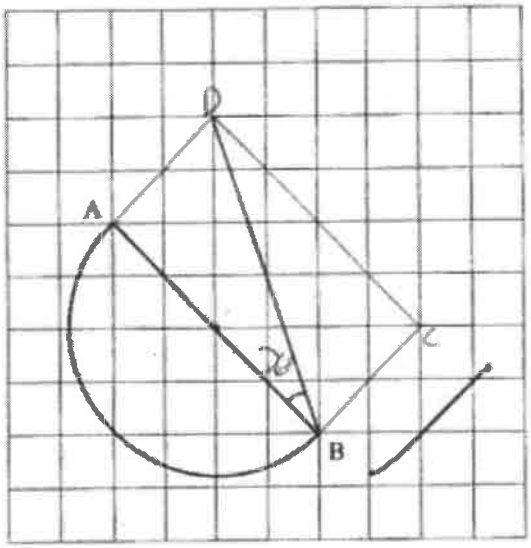
Q16)	5.005
Q17)	148 – 15 = 133 133s = 2 min 13s
Q18)	160 – 100 = 60
Q19)	$\frac{1}{200}$
Q20)	
Q21)	20 years old

Q22)	100
Q23)	48°
Q24)	7 : 13
Q25)	50 – 2 = 48 48 ÷ 2 = 24
Q26)	$\frac{13}{30}$
Q27)	2 cm2
Q28)	Missing page
Q29)	Missing page
Q30)	78cm2

PAPER 2

Q1)	270 – 60 = 210 210 ÷ 7 = 30
Q2)	36 : 35
Q3)	South
Q4)	2 x 3 = 6 5u – 2u = 3u 3u + 18 + 5u + 3u + 6 = (11u + 24)
Q5)	4units x 2 = 8 units 8 units x 8 units = 64 units2 1 unit x 1 unit = 1units2 2 units x 2 units = 4 units2 4 units x 4units = 16 units2 1 units2 + 1 units2 + 16 units2 = 21 units2 $\frac{21\ units2}{64\ units2} = \frac{21}{64}$
Q6)	1 unit x 3 + 2 units = 5 units 3.3m = 330cm 330 ÷ 5 = 66 66 x 2 = 132cm
Q7)	11.14 x 12.5 = 139.25 ½ x 6 x 12.5 = 37.5 37.5 + 139.25 = 176.75cm2

Q8)	9 x 26 = 234 1278 – 234 =1044 26 + 32 = 58 1044 ÷58 = 18 18 + 9 = 27
Q9)	(600 – 120) ÷2 = 240 240 ÷80 = 3 3 x 100 = 300 300 – 240 = 60 140 – 60 = 80 240 +120 = 360 360 + 80 = $440
Q10)	Tuesday
Q11)	40÷2 = 20 3 x 20 x 20 x 60 = 72000 $\frac{3}{5}$ x 100 = 60 60 x 60 x 80 = 288000 288000 – 72000 = 216000 216000cm3 = 216000ml 216000ml = 216L
Q12)	¾ x big circle + ½ x small circle = ¾ x 3.14 x 10m x 10m + ½ x 3.14 x 5m x 5m =274.75m2
Q13)	a)19 b)99 c)(109 – 1) ÷2 = 54 54 + 1 = 55
Q14)	a)45 to 54 b)15 to 24 c)100% → 47000 1% -→47000 ÷ 100 = 470 18% →470 x 18 = 8460 (deverily) $11500000 ÷ 8400 ≈ $13593.381 ≈ $13593

Q15)	a)2.9cm b)  c)26°
Q16)	a)2 to 3 week b)2600 + 3400 + 3800 + 4600 + 5000 = 19400 19400 ÷ 5 = 3880
Q17)	11 units – 5 units = 6 units 6 untis = 136 – 46 = 90 1 unit = 90 ÷ 6 = 15 11units = 15 x 11 = 165 165 + 46 = 211 165 – 136 = 29 165 + 29 + 46 = 240 240 ÷ 2 = 120 120 – 29 = 91 46 + 29 + 136 + 91 = 302cm