NAN HUA PRIMARY SCHOOL
END OF YEAR EXAMINATION – 2020
PRIMARY 5

MATHEMATICS
PAPER 1
(BOOKLET A)

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the 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 for Questions 1-15.
6. The use of calculators is **NOT** allowed.

Name : _____ ( )

Class : 5_____

Date : 29 October 2020 **Parent's Signature :**_____

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) and shade your answer on the Optical Answer Sheet (OAS)

(20 marks)

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1. Which of the following fractions is closest to $\frac{1}{2}$?

   (1) $\frac{3}{4}$

   (2) $\frac{5}{8}$

   (3) $\frac{4}{9}$

   (4) $\frac{7}{10}$ ( )

2. In the number 130.24, which digit is in the hundredths place?

   (1) 1

   (2) 2

   (3) 3

   (4) 4 ( )

3. Find the value of $88 \div 8 + 3 \times (6 - 2)$.

   (1) 23

   (2) 32

   (3) 56

   (4) 82 ( )

4. What is the value of $14 \div 4$?

(1) $\frac{1}{4}$

(2) $\frac{2}{7}$

(3) $3\frac{1}{4}$

(4) $3\frac{1}{2}$ ( )

5. There are 10 apples, 32 grapes and 16 mangosteens in a basket. Find the ratio of the number of apples to the total number of fruits. Give your answer in the simplest form.

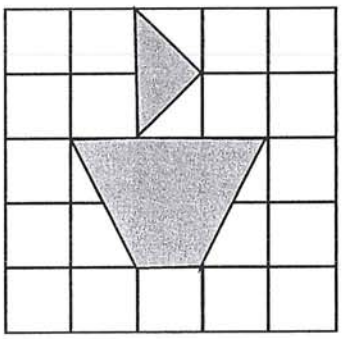
(1) 5 : 29

(2) 5 : 24

(3) 8 : 21

(4) 16 : 29 ( )

6. A picture is drawn on a square grid.



What percentage of the square grid is shaded?

(1) 5%

(2) 8%

(3) 20%

(4) 80% ( )

7. The students in Class 5G sat for a Mathematics test that lasted for 1 h 50 min. The test ended at 12.05 p.m. What time did the test start?

(1) 10 15
(2) 10 45
(3) 22 15
(4) 22 45

( )

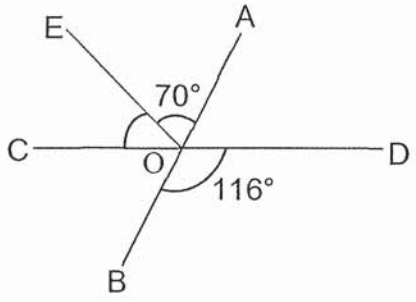
8. What is the value of 20 ÷ 5000 ?

(1) 0.004
(2) 0.04
(3) 25
(4) 250

( )

9. In the figure, AOB and COD are straight lines. Find ∠COE.

(The figure is <u>not</u> drawn to scale)



(1) 46°
(2) 55°
(3) 70°
(4) 186°

( )

10. The table shows the airmail rates of sending letters to Australia.

Mass step	Airmail rates
First 20 g	$0.80
Every additional 10 g	$0.25

Miss Sim sent a letter weighing 28 g to Australia by airmail.
How much did she pay?

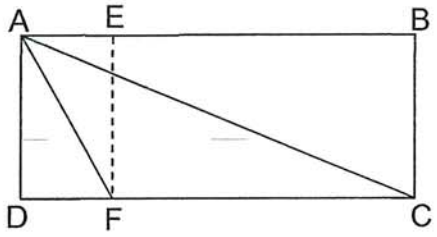
(1) $0.75
(2) $0.80
(3) $1.00
(4) $1.05

( )

11. The price of a pen is \$1.85. After paying for 10 such pens, John got \$1.50 change. How much money did he give to the cashier?

(1) \$3.35
(2) \$13.35
(3) \$18.50
(4) \$20.00 ( )

12. Look at the figure below. The area of △ACF is equal to _____.



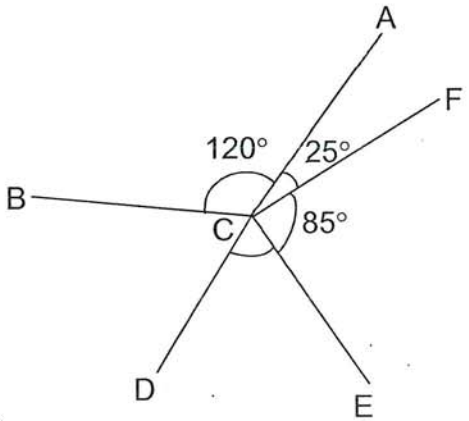
(1) $\frac{1}{2}$ of the area of rectangle AEFD.

(2) $\frac{1}{2}$ of the area of rectangle BCFE.

(3) $\frac{1}{2}$ of the area of triangle ACD.

(4) $\frac{1}{2}$ of the area of rectangle ABCD. ( )

13. In the figure, ∠ACB = 120°, ∠ACF = 25°, ∠ECF = 85° and ∠BCD = ∠DCE. Find ∠DCE. (The figure is <u>not</u> drawn to scale)



(1) 60°
(2) 65°
(3) 70°
(4) 130° ( )

14. The table shows the number of children in each family living in a HDB block.

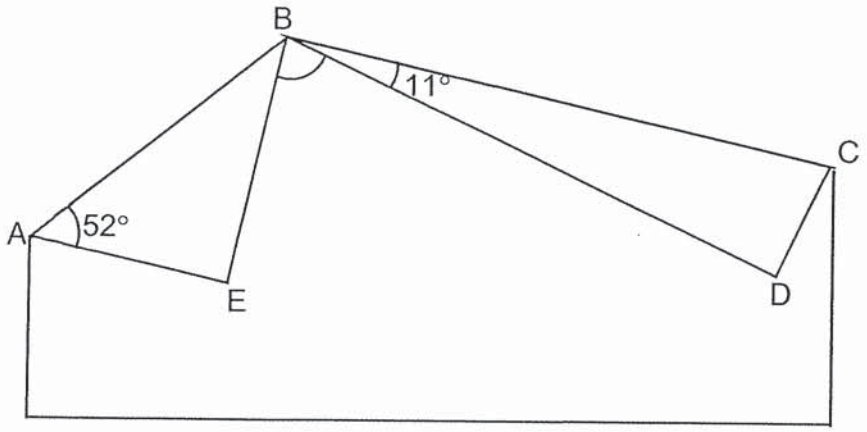
Number of children in each family	Number of families
0	10
1	12
2	20
3	5
4	2

What is the total number of children living in the HDB block?

(1) 39
(2) 49
(3) 75
(4) 85

( )

15. A rectangular piece of paper, not drawn to scale, is folded at two corners as shown below. Given that $\angle BAE = 52°$ and $\angle CBD = 11°$, find $\angle DBE$.



(1) 41°
(2) 82°
(3) 117°
(4) 131°

( )

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)

Do not write in this space

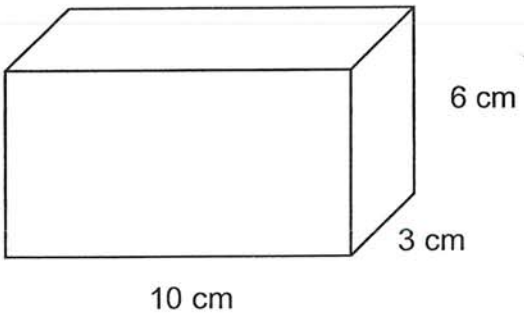
16. Write down one decimal between 6.3 and 6.4.

Ans: _____

17. Express 48 : 60 in the simplest form.

Ans: _____:_____

18. Find the volume of the cuboid.



Ans: _____ cm^3

Subtotal	/ 3

19. Find the value of 2.4×4000.

Do not write in this space

Ans: _____

20. The table shows Caili's scores in her 3 Mathematics tests.

Test	1	2	3
Score	97	83	90

Find the average score for her 3 tests.

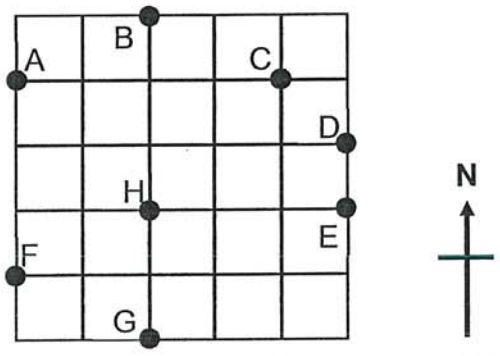
Ans: _____

Subtotal	/ 2

Do not write in this space

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

21. The square grid shows the positions of points A, B, C, D, E, F, G and H.



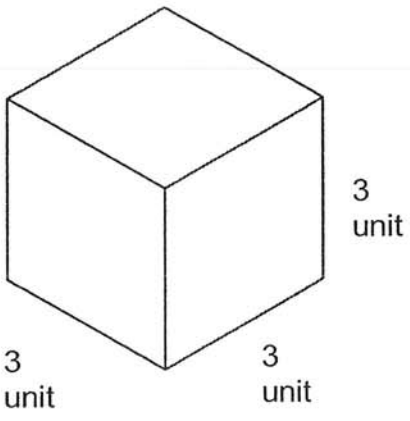
(a) Jack jogged directly from point G to point D in a straight line. In which direction did he jog?

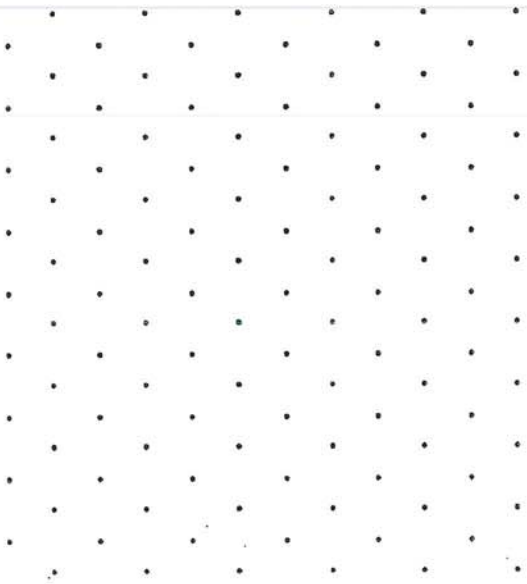
(b) Jill stood at point A facing point C. Next, she turned 45° clockwise. Which point would Jill be facing?

Ans: (a)_____

(b) Point : _____

22. Draw the following cube on the isometric grid.





Subtotal	/ 4

Do not write in this space

23. (a) Find the value of $\frac{3}{8} + \frac{5}{6}$.

Give your answer as a mixed number in the simplest form.

(b) Find the value of $\frac{7}{10} \times \frac{4}{5}$.

Give your answer in the simplest form.

Ans: (a) _____

(b) _____

24. Two whole numbers add up to 2047. What is the smallest difference between the two numbers? Write down these two numbers.

Ans: Smallest difference : _____

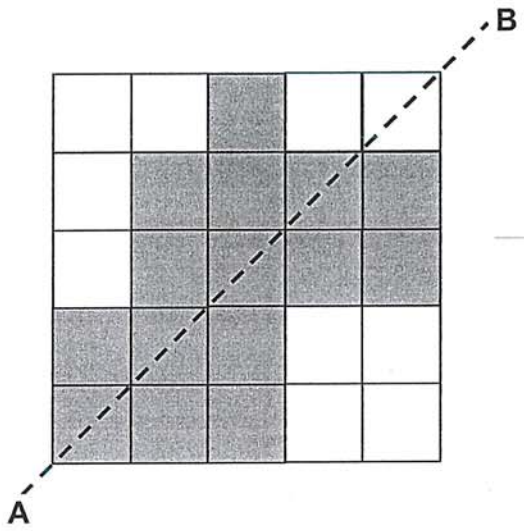
Numbers : _____, _____

Subtotal	/ 4

Do not write in this space

25. The figure below shows 15 shaded squares.

Shade 3 **more** squares to complete the symmetric pattern with AB as the line of symmetry.



26. (a) Express 0.05 as a percentage.

(b) A rectangle has an area 36 cm^2. 25% of the rectangle is shaded. Find the shaded area.

Ans: (a) _____

(b) _____ cm^2

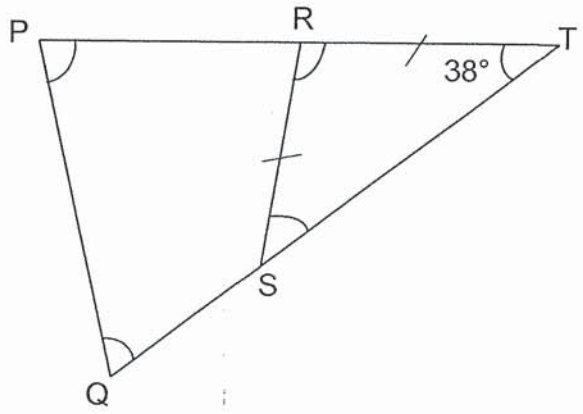
Subtotal	/ 4

27. ABC Primary School plans a learning journey for 9 Primary Five classes with 35 students in each class. One teacher is to look after not more than 20 students. What is the least number of teachers needed for the excursion?

Do not write in this space

Ans: _____

28. PQT and RST are triangles, RST is an isosceles triangle and $\angle PTQ = 38°$.



The figure above is not drawn to scale.

Each of the statement below is either true, false or not possible to tell from the information given. For each statement, put a tick (✓) to indicate your answer.

Statement	True	False	Not possible to tell
$\angle PQT + \angle QPT = \angle RST + \angle SRT$			
$\angle SRT = 142°$			

Subtotal	/ 4

Do not write

29. Aini was paid $8 for every wallet she sold. For every 5 wallets sold, she was given a bonus of $10. How many wallets did she sell if she received $550?

Do not write in this space

Ans: _____

30. Danny is twice as old as his sister. The ratio of his sister's age to his father's age is 1: 10. Danny was 5 years old a year ago. How old will their father be in 3 years' time?

Ans: _____

--- End of Paper 1 ---

Subtotal	/ 4

NAN HUA PRIMARY SCHOOL
END OF YEAR EXAMINATION – 2020
PRIMARY 5

MATHEMATICS
PAPER 1
(BOOKLET B)

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the 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. The use of calculators is **NOT** allowed.

Marks Obtained

Paper 1	Booklet A		/ 45
	Booklet B		
Paper 2			/ 55
Total			/ 100

Name : _____ ( )

Class : 5_____

Date : 29 October 2020 Parent's Signature :_____

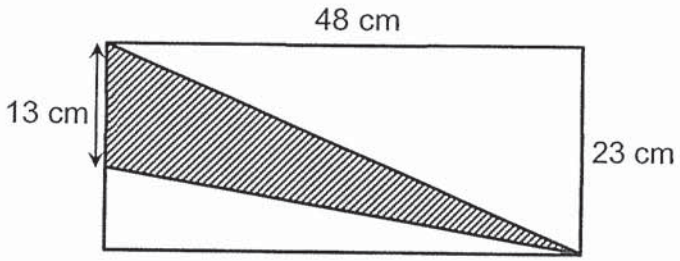
Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

1. At a walkathon, the ratio of the number of male participants to the number of female participants is 5:3. There are 6375 male participants at the walkathon. How many female participants are there?

Ans: _____

2. Find the area of the shaded part of the figure.

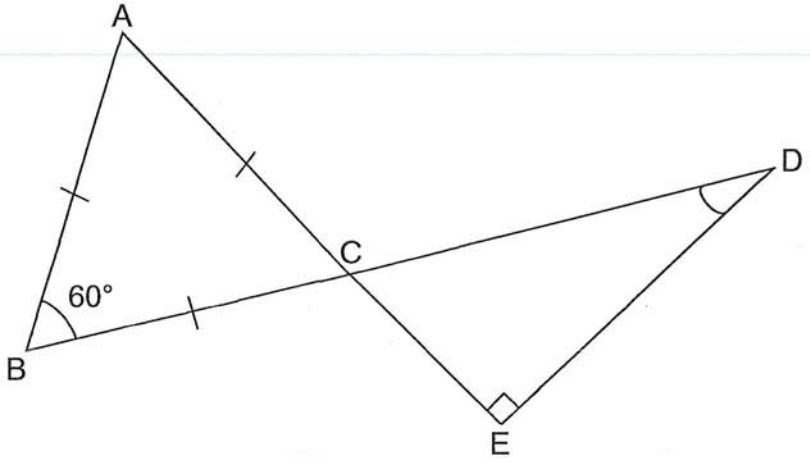


Ans: _____ cm^2

Subtotal	/ 4

3. The figure below is made up of an equilateral triangle ABC and a right-angled triangle, CDE.
ACE and BCD are straight lines. Find ∠CDE.

Do not write in this space



Ans: _____ °

4. Mathew and Alvin go to the same gym to exercise. Mathew goes to the gym every 3 days while Alvin goes there every 5 days. If they meet on Day 1, on which day will they meet at the gym again?

Ans: Day _____

5. Mr Johnson jogs twice a week. Each time, he jogs $3\frac{2}{5}$ km from his home to the park and returns on the same route. What is the total distance that Mr Johnson jogs in a week?

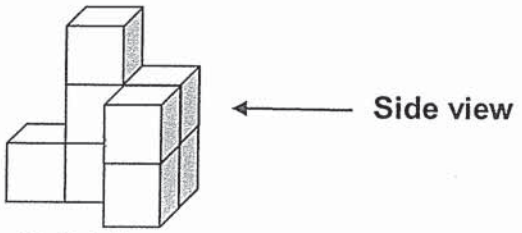
Ans: _____ km

Subtotal	/ 6

For questions **6** to **17**, show your working clearly 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)

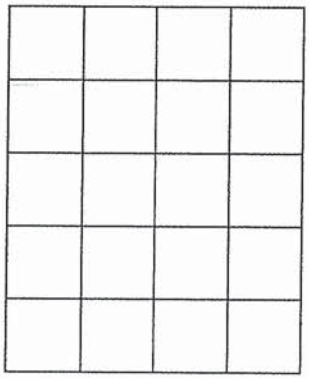
Do not write in this space

6. (a) Solid A is made of 1-cm unit cubes.

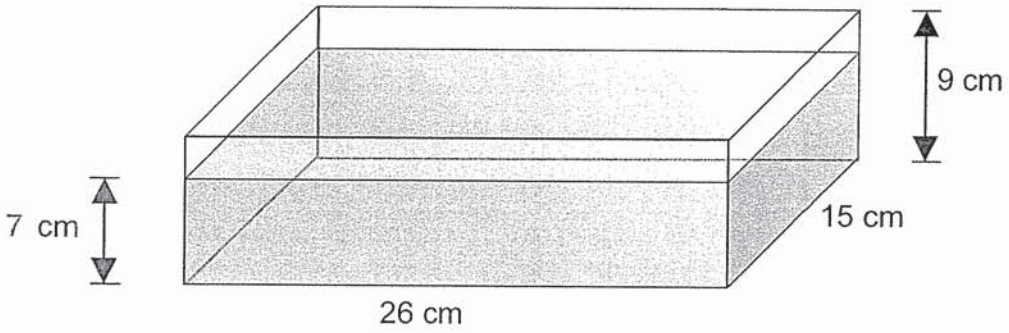


Solid A

Draw on the square grid below the side view of Solid A. [1]



(b) A rectangular tank measures 26 cm by 15 cm by 9 cm.
It is filled with water to a depth of 7 cm.
How much more water is needed to fill the tank completely?



Ans: (b) _____ [2]

7. Mr Ahmad wants to buy a television set that costs $1899 before the 7% GST. How much does Mr Ahmad have to pay in total for the television set? (Give your answer correct to the nearest dollar)

Do not write in this space

Ans: _____ [3]

8. Mrs Tan loves to watch movies. She downloads 60 movies every month. Study the table below and help Mrs Tan decide which plan is cheaper for her to subscribe.

	Plan A	**Plan B**
Monthly subscription	$20 (Free 10 movies)	$27 (Free 20 movies)
Charge per downloaded movie	$2.50	$3.00

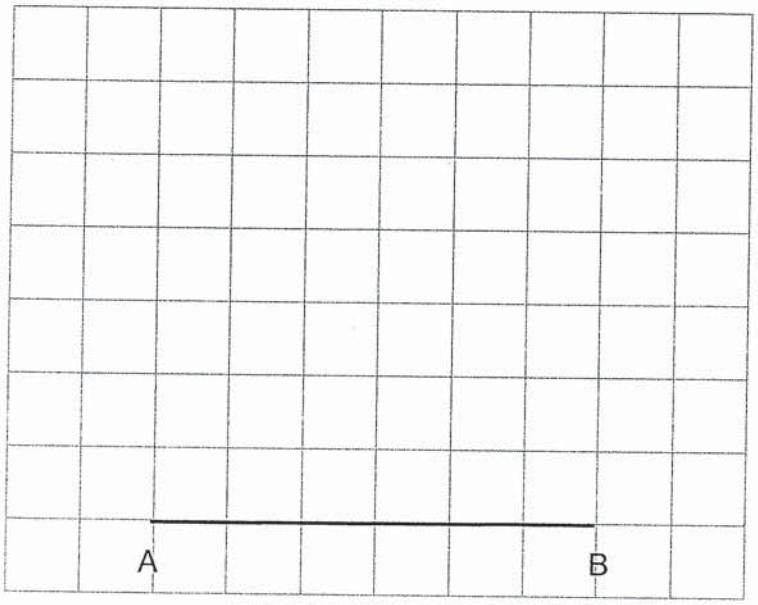
Ans: Plan_____ [3]

Subtotal	**/ 6**

9. In the square grid below, AB is one side of Triangle ABC.

(a) Draw two more lines to complete Triangle ABC so that $\angle ACB = \angle BAC = 45^{\circ}$. [2]

(b) Measure and write down the length of AC.



Ans: (b) _____ [1]

Do not write in this space

10. The average height of 3 boys, Issac, Jeremy and Kenneth, is 162 cm. Issac is 158 cm. Jeremy and Kenneth are of the same height. How tall is Jeremy?

Ans: _____ [3]

Subtotal	/ 6

Do not write in this space

11. Annie had $\frac{1}{10}$ of her money left after buying a present. At a cake shop, she spent half of the remaining amount. She then bought a Mcdonald's meal for $5.70 and had $3.50 left. How much money did she have at first?

Ans: _____ [4]

12. Mr Tan paid a total of $1616 for 28 shirts and trousers.
Each shirt cost $65 and each pair of trousers cost $48.
How many shirts did he buy?

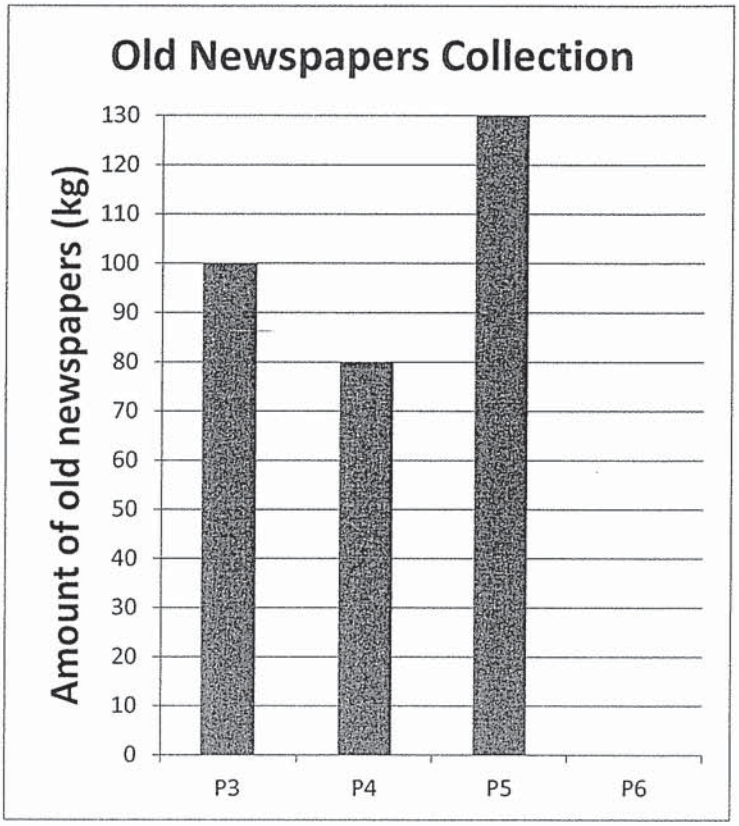
Ans: _____ [4]

Subtotal	/ 8

13. During a school competition for collection of old newspapers, only four levels took part, P3, P4, P5 and P6. The bar graph below shows the amount of old newspapers collected by each level in 1 day. A total of 420 kg of old newspapers was collected.

Do not write in this space

(a) The bar that shows the amount of old newspapers collected by P6 has not been drawn. Calculate the amount of newspapers collected by P6.



(b) What percentage of the total amount of old newspapers was collected by P5? (Give your answer correct to 2 decimal places)

Ans: (a)_____ [2]

(b)_____ [2]

14. Mrs Tan made as many chocolate muffins as blueberry muffins.
She gave away $\frac{1}{3}$ of the chocolate muffins and $\frac{1}{4}$ of the blueberry muffins.
Among the muffins that were left, there were 35 more blueberry muffins than chocolate muffins.

(a) What fraction of the muffins were given away?
Leave your answer in the simplest form.

(b) How many muffins were left?

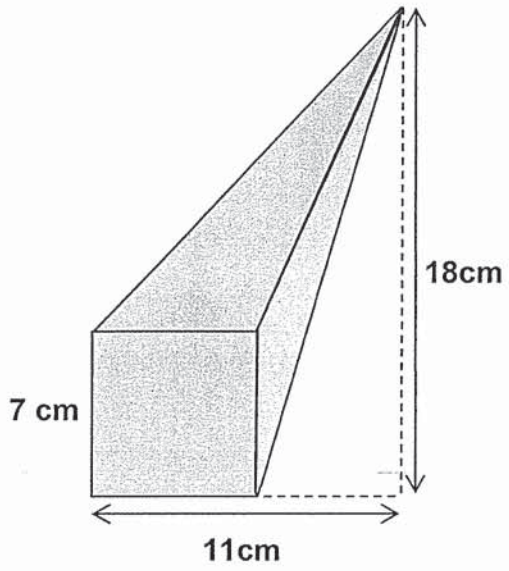
Do not write in this space

Ans: (a)_____ [1]

(b)_____ [3]

Do not write in this space

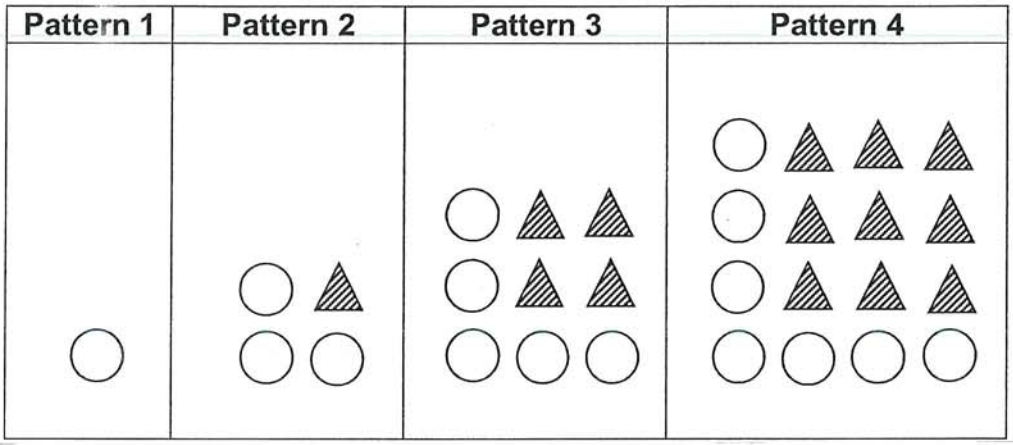
15. The following figure is made up of a square and two triangles. Find the total area of the figure.



Ans: _____ [4]

16. The pattern below is made up of circles and triangles.
Study the pattern carefully and answer the questions below.

Do not write in this space



(a) How many circles are needed to form Pattern 6?

(b) Which Pattern number has exactly 36 triangles?

(c) The number of circles used in Pattern N is exactly the same as the number of triangles used to form Pattern 10. What is N?

Ans: (a)_____[1]

(b)_____[2]

(c)_____[2]

17. George had a sum of money. He spent $\frac{1}{3}$ of his money on food, $\frac{2}{5}$ of his remaining money on clothes and the remaining $156 on a new watch.

(a) How much did he spend on clothes?

(b) How much was his sum of money?

Do not write in this space

Ans: (a)_____ [3]

(b)_____ [2]

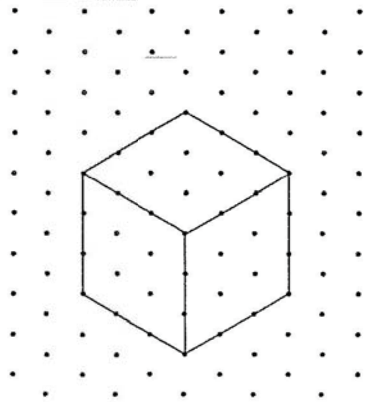
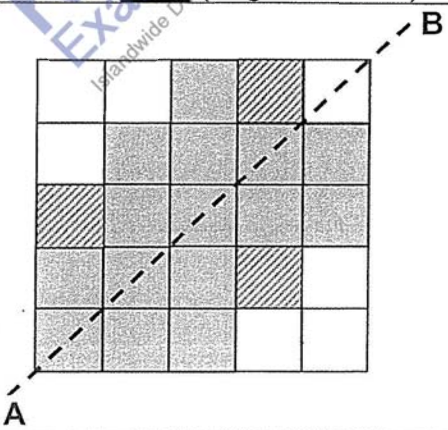
--- End of Paper 2 ---

NHPS P5 Math Paper 2 Answers

Paper 1

1)	3	**6)**	3	**11)**	4
2)	4	**7)**	1	**12)**	2
3)	1	**8)**	1	**13)**	2
4)	4	**9)**	1	**14)**	3
5)	1	**10)**	4	**15)**	2

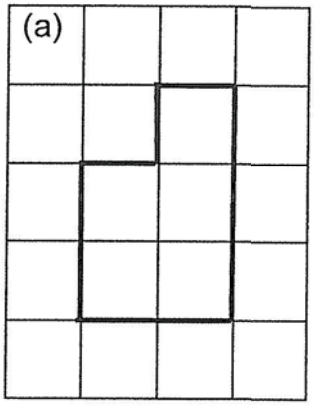
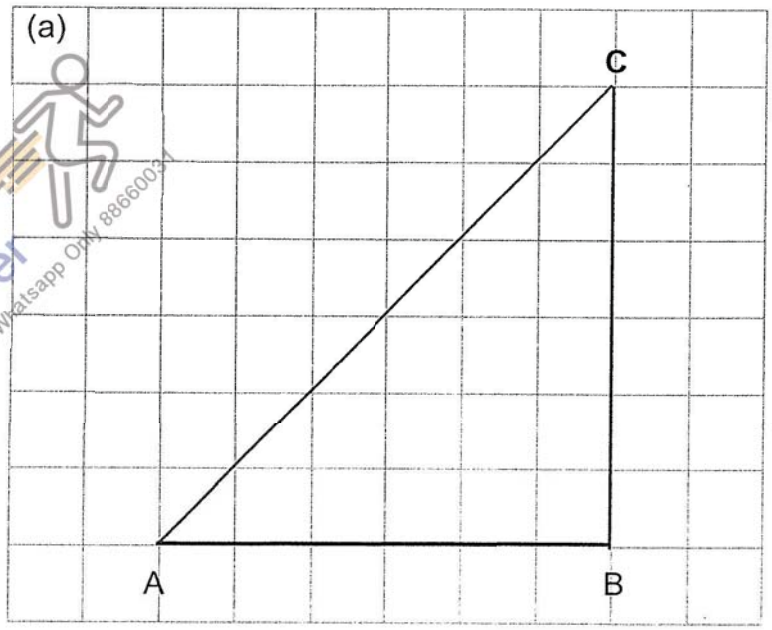
Section B (25 marks)

16)	Any decimal greater than 6.3 but less than 6.4.
17)	4:5
18)	180
19)	9600
20)	90
21)	(a) North-east (b) H
22)	
23	(a) $\frac{3}{8}+\frac{5}{6}=\frac{9}{24}+\frac{20}{24}=1\frac{5}{24}$ (b) $\frac{7}{10}\times\frac{4}{5}=\frac{14}{25}$
24	To get the smallest difference between the 2 numbers, they must be consecutive numbers so that the larger number is **1** more than the smaller number (A1) 2 units = 2047 – 1 = 2046 1 unit = 2046 ÷ 2 = **<u>1023</u>** (smaller number) 1023 + 1 = **<u>1024</u>** (larger number)
25	
26	(a) 0.05 = **<u>5%</u>** (b) 25% of 36 = **<u>9</u>**

27	35 x 9 = 315 315 ÷ 20 = 15R15 (**16** teachers) Or 315 is approximately 320 320 ÷ 20 = **16**			
28	∠PQT + ∠QPT = ∠RST + ∠SRT	True		
	∠SRT = 142°		False	
29	8 x 5 + 10 = 50 550 ÷ 50 = 11 11 × 5 = **55** Or $10 ÷ 5 wallets = $2 $8 + $2 = $10 $550 ÷ $10 = **55**			
30	D : E : F = 2 : 1 : 10 = (5+1=6) : (6÷2=3) : (10x3=30). 30 + 3 = **33**			

Paper 2

1.	6375 ÷ 5 = 1275 1275 x 3 = **3 825**
2.	Shaded area = $\frac{1}{2}$ x 13 x 48 = **312 cm²** **Or** 48 x 23 = 1104 $\frac{1}{2}$ x 10 x 48 = 240 $\frac{1}{2}$ x 23 x 48 = 552 1104 -240 – 552 = **312** Or 552 - 240 = **312**
3.	∠CDE = 90 ° – 60 ° = **30**
4.	Multiples of 3: 3,6,9,12,**15**,18,… Multiples of 5: 5,10,**15**,20,… They will meet 15 days later which is on **Day 16.**
5.	2 x $3\frac{2}{5}$ km = $6\frac{4}{5}$ km 2 x $6\frac{4}{5}$ km = $13\frac{3}{5}$ km

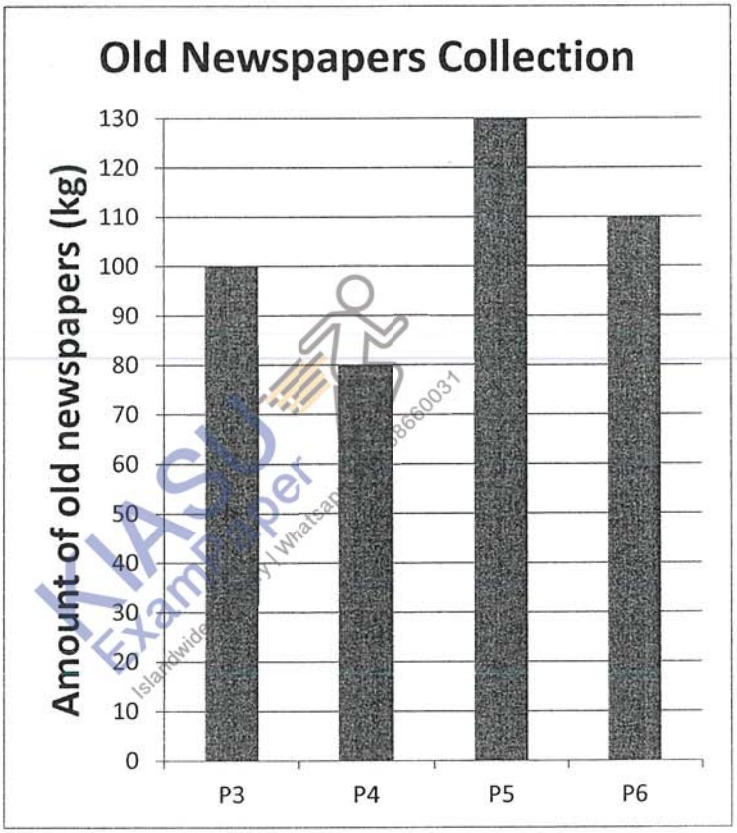
6.	(a)  (b) Capacity of tank = 26 × 15 × 9 = 3510 cm^3 Volume of water in tank= 26 × 15 × 7= 2730 cm^3 3510 cm^3 - 2730 cm^3 = **780 cm^3** or **780 mℓ** or **0.78 ℓ** **Or** Volume of water needed= 26 × 15 × 2= **780 cm^3**
7.	$\frac{107}{100}$ x \$1899 = \$2031.93 Mr Ahmad pays **\$2032**
8.	Plan A : 60 – 10 = 50 50 x \$2.50 + \$20 = \$145 Plan B : 60 – 20 = 40 40 x \$3 + \$27 = \$147 **Plan A is cheaper.**
9.	(a)  (b) **8.4 cm (+/- 0.1cm)**
10.	162 x 3 = 486 486 – 158 = 328 328 ÷ 2 = 164 Jeremy is **164 cm**.

11. Working backwards,
$3.50 + $5.70 = $9.20
$9.20 x 2 = $18.40
$18.40 x 10 = **$184**

12. Assume all are trousers.
28 x $48 = $1344
$1616-$1344 = $272
$65 - $48 = $17
$272 ÷ $17 = **16**
Or
Assume all are shirts.
28 x $65 = $1820
$1820-$1616 = $204
$65 - $48 = $17
$204 ÷ $17 = 12
28 – 12 = **16**
Or

No. of shirts	No. of trousers	Total cost	Check
14	14	14x$65 + 14x$48 = $1582	x
15	13	15x$65 + 13x$48 = $1599	x
16	12	16x$65 + 12x$48 = $1616	√

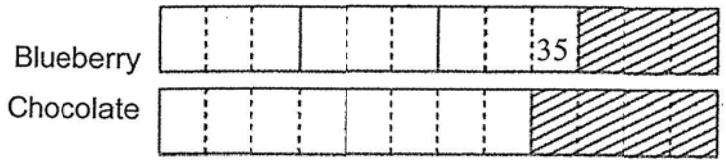
13. (a) 420-100-80-130 = **110**



(b) $\frac{130}{420}$ x 100 %

≈ **30.95%**

14.



(a) Fraction of the total muffins given away = $\frac{7}{24}$

(b) 1 unit = 35 (M1)
17 units = 35 x 17 = **595**

15.

Area of Square ⟶ 7 cm × 7 cm

= 49 cm²

Area of △ **(top)** ⟶ $\frac{1}{2}$ × 7cm × 11cm

= 38.5 cm²

Area of △ **(side)** ⟶ $\frac{1}{2}$ × 7 cm x 4 cm

= 14 cm²

Total Area ⟶ (49 + 38.5 + 14) cm²

= **101.5 cm²**

Or

Area of rectangle = 18cm x 11cm = 198 cm²

Area of unshaded△ **(left)** = $\frac{1}{2}$ × 11cm x 11cm

= 60.5 cm²

Area of unshaded△ **(right)** = $\frac{1}{2}$ × 18 cm x 4cm

= 36 cm²

Total Area ⟶ (198 - 60.5 - 36) cm² = **101.5 cm²**

16.

(a) 2 x 6 – 1 = **11**

(b) 36 = 6 x 6
6 + 1 = **7**
Answer : **Pattern 7**

(c) 10 - 1 = 9
9 x 9 = 81
2N – 1 = 81
2N = 81 + 1= 82
N = 82 ÷ 2 = **41**

17.

$1 - \frac{1}{3} = \frac{2}{3}$

$\frac{2}{5} \times \frac{2}{3} = \frac{4}{15}$

	$1 - \frac{1}{3} - \frac{4}{15} = \frac{6}{15}$ 156 ÷ 6 = 26 (a) \$26 x 4 = **\$104** (b) \$26 x 15 = **\$390 Or** $\frac{3}{5}$ of remainder = \$156 \$156 ÷ 3 = \$52 \$52 X 2 = **\$104** \$52 x 5 = \$260 (Remainder) \$260 ÷ 2 = \$130 \$130 x 3 = **\$390**

2ND.