



NORMAN TIEN MATHEMATICS

DELIVERING BEYOND ACADEMICS

PSLE Preparation

Latest Real School
PRELIMINARY EXAMINATION PAPER 01

2007 Mathematics

Name: _____

Date: _____

Total time for BOOKLETS A and B : 2hr 15mins

Doing well in Mathematics involve **understanding the concepts** as well as doing **more practices**. To receive more **latest school exam papers**, please log on to www.normantien.com for subscription of our latest updates.

BOOKLET	MARKS
A	/ 20
B-I	/ 10
B-II	/ 20
C	/ 50
Total	/ 100

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.**

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).

(20 marks)

1. $700\,000 + 5000 + 30 + 2 = \underline{\hspace{2cm}}$

(1) 700 532

(2) 705 032

(3) 705 302

(4) 750 320

()

2. The best estimate of $8126 \div 18$ is .

(1) 4510

(2) 451

(3) 45.1

(4) 4.51

()

3. What is the missing number in the box?

$$0.04708 \times \boxed{} = 47.08$$

(1) 10 000

(2) 1000

(3) 100

(4) 10

()

4. What is the missing number in the box?

$$5 \text{ kg} + 3 \text{ g} = \boxed{} \text{ kg}$$

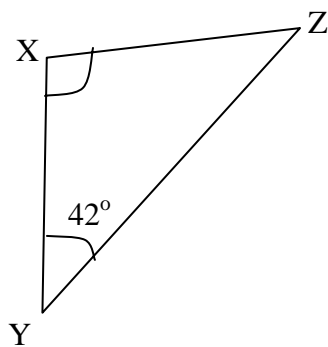
- (1) 5030
- (2) 500.3
- (3) 5.003
- (4) 50.03 ()

5. 2 cakes are shared among 9 children equally. What fraction of a cake does each child receive?

- (1) $\frac{1}{9}$
- (2) $\frac{9}{2}$
- (3) $\frac{2}{9}$
- (4) $\frac{1}{2}$ ()

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6. XYZ is an isosceles triangle and $XY = XZ$.



Find $\angle YXZ$.

- (1) 42°
- (2) 84°
- (3) 138°
- (4) 96° ()

7. The average of 12 and x is _____.

(1) $12 + x$

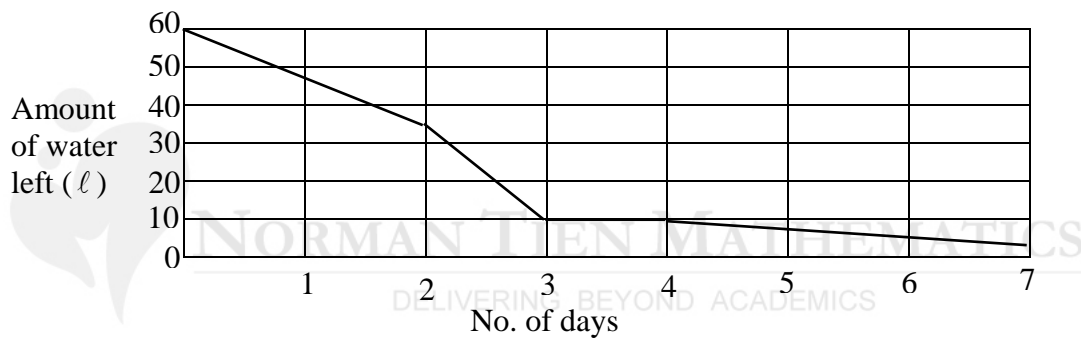
(2) $6 + x$

(3) $\frac{12x}{2}$

(4) $\frac{12+x}{2}$

()

8. The graph below shows the amount of water left in a camp and the number of days that has passed.



How much water was used for the first 3 days of camp?

(1) 10ℓ

(2) 25ℓ

(3) 35ℓ

(4) 50ℓ

()

9. Alan types documents at a rate of 10 pages in 5 minutes. At this rate, how many pages can Alan type in 0.5 hour?

(1) 60

(2) 100

(3) 120

(4) 300

()

10. Jasmine had $\frac{3}{4}$ kg of durians. She ate $\frac{2}{5}$ of it. How many kg of durians were left?

(1) $\frac{1}{10}$ kg

(2) $\frac{9}{20}$ kg

(3) $\frac{3}{10}$ kg

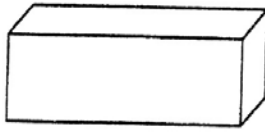
(4) $\frac{3}{5}$ kg

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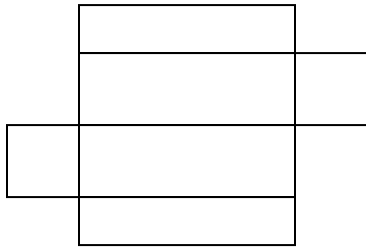
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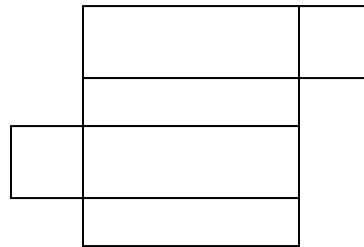
11. This figure shows a cuboid.



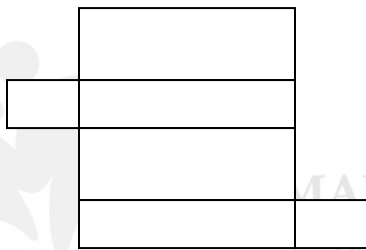
Which of the following are nets of the cuboid?



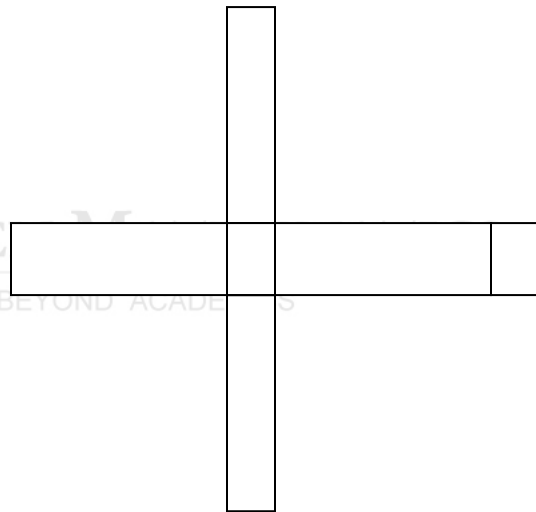
A



B



C

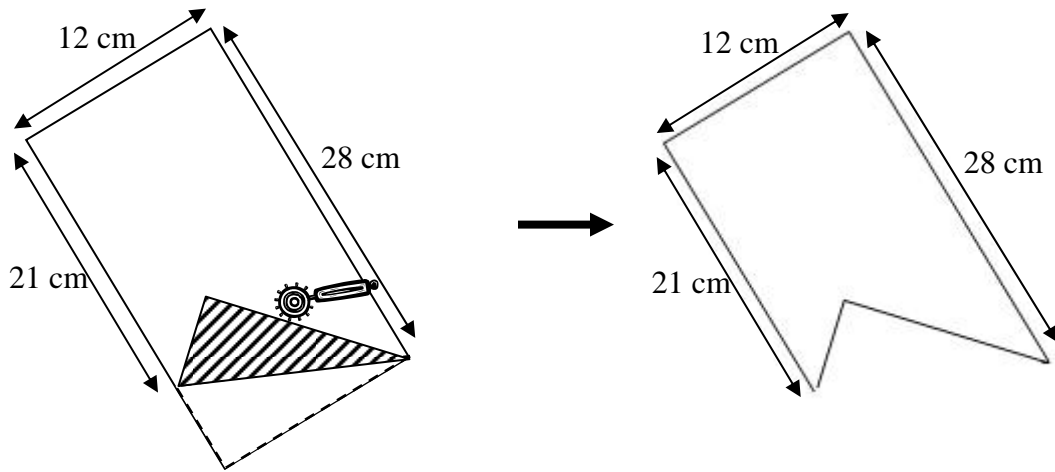


D

- (1) A and B
- (2) A and C
- (3) B and C
- (4) C and D

()

12. A construction paper, has lines on one side, is folded and then cut as shown.



Find the area of the remaining piece of paper.

- (1) 252 cm^2
- (2) 238 cm^2
- (3) 294 cm^2
- (4) 196 cm^2

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13. Fiona has a long rope. She cut off $\frac{4}{7}$ of it and then another $\frac{2}{9}$ of it. What fraction of the length of the rope was left?

- (1) $\frac{50}{63}$
- (2) $\frac{13}{63}$
- (3) $\frac{3}{8}$
- (4) $\frac{1}{7}$

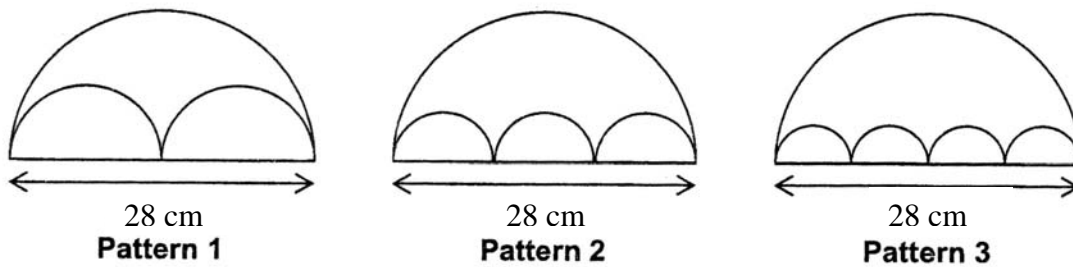
()

14. A cube has a volume of 1000 cm^3 . When the length of each edge of the cube is halved, what will the volume of the cube be?

- (1) 125 cm^3
- (2) 500 cm^3
- (3) 50 cm^3
- (4) 25 cm^3

()

15. The following patterns are made up of semicircles.



Pattern	Total area of small semicircles : Area of large semicircle
1	1 : 2
2	1 : 3
3	1 : 4

What is the total area of the small semicircle in Pattern 7 in terms of π ?

- (1) $6.125 \pi \text{ cm}^2$
- (2) $3.5 \pi \text{ cm}^2$
- (3) $24.5 \pi \text{ cm}^2$
- (4) $12.25 \pi \text{ cm}^2$

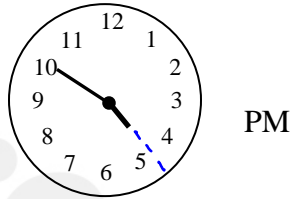
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Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

16. Find the value of $8 \times (12 - 7) \div 4 + 8$.

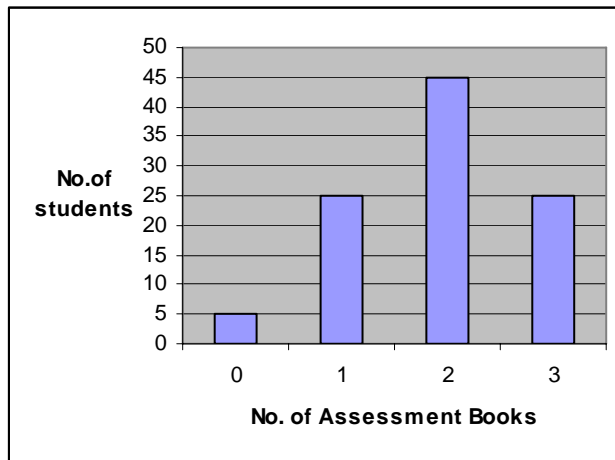
Ans : _____

17. What is the time shown on the clock face? Give your answer using the 24-hour clock.



Ans : _____

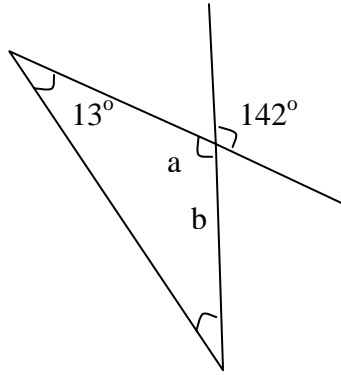
18. The bar graph below shows the number of assessment books bought by 100 students.



What was the total number of assessment books bought by the students?

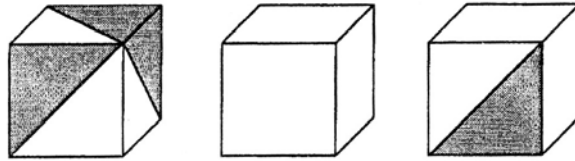
Ans : _____

19. Find $\angle b$.

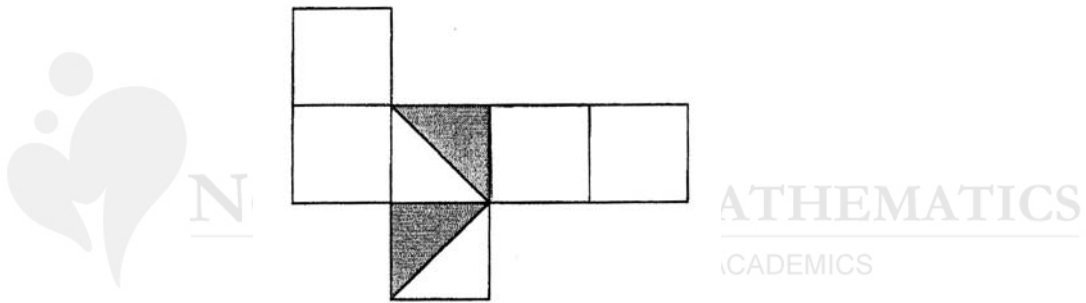


Ans : _____^o

20. The figure below show 3 views of the same cube.



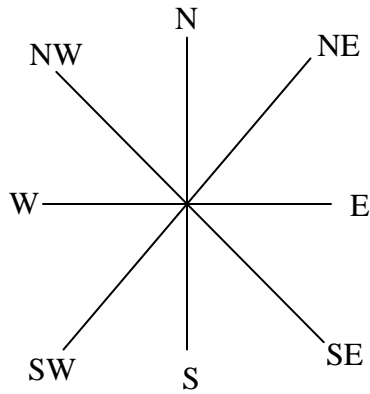
Shade the net below so that it is the net of the cube shown.



21. At first, Jamie has $\$4x$. Then, her father gave her $\$2x$. If $x = 30$, how much money does Jamie have now?

Ans : _____

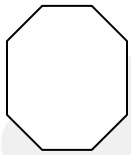
22.



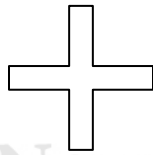
Jolene is facing the SW. When she turns 90° anti-clockwise and then 135° clockwise, where will she be facing?

Ans : _____

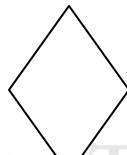
23. Which of the following shapes can tessellate?



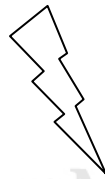
A



B



C

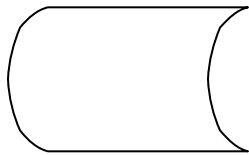


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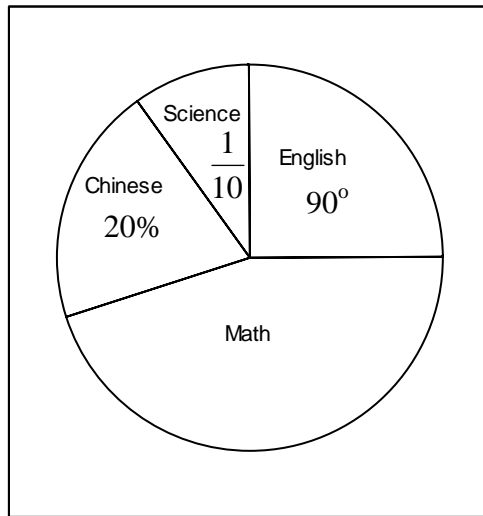
Ans : _____

24. How many lines of symmetry does the figure have?



Ans : _____

25. The pie chart below shows the favourite subjects of a group of students.



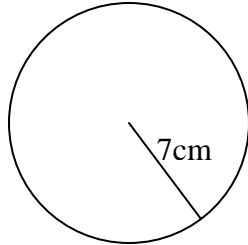
What fraction of the children chose Math as their favourite subject?
(Give your answer in its simplest form.)

Ans : _____



Questions **26** to **35** carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (20 marks)

26. Find the circumference of the circle. (Take $\pi = \frac{22}{7}$)



Ans : _____ cm

27. Aisha scored an average of 85 points for 2 rounds of bowling. To make sure she gets an average score of 90 points for the 3 rounds, how many points must be scored in the third round?

Ans : _____

28. The table below shows the postage charges for sending parcels to Japan and China.

Country	Weight of parcel not over 50g	Additional 30g or part thereof
Japan	\$3	\$1.20
China	\$1	\$0.40

Michael wants to send a parcel weighing 1kg 40g to his sister in Japan and another parcel weighing 960 g to his brother in China. In total, how much does he have to pay for the postage?

Ans : \$ _____

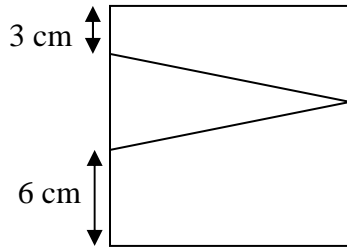
29. Mrs Lee took 5 h to travel from Town X to Town Y at an average speed of 57.4 km/h. If Mr Lee took 1.5 h less than Mrs Lee for the same journey, what was his average speed in km/h?

Ans : _____ km/h

30. In a yoga club, 75% of the members are females. How many percent **more** female members than male members are there in the yoga club?

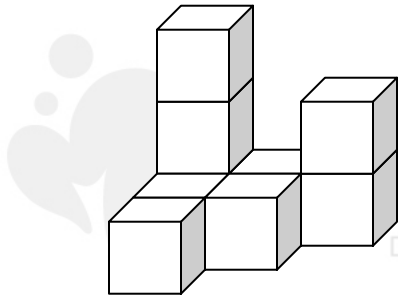
Ans : _____ %

31. The figure below shows a triangle in a square. The perimeter of the square is 60 cm. Find the area of the triangle.



Ans : _____ cm²

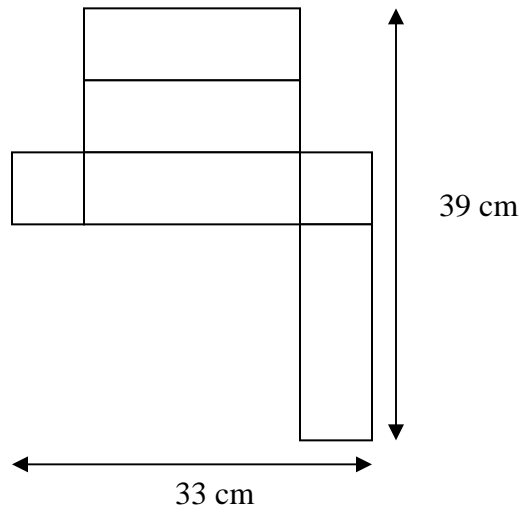
32. The solid shown below is made up of 1-cm cubes.



How many **more** 1-cm cubes are needed to make the solid into a 3-cm cube?

Ans : _____

33. The diagram below shows a net of a cuboid.
It is made up of 4 rectangles and 2 squares.



Find the volume of the cuboid.

Ans : _____ cm^3

34. Albert, Bernard, Caleb and Desmond shared a gift for a friend. Each of them have to pay the same amount, but Bernard forgets to bring his wallet, hence the rest paid for his share first.
The ratio of the total amount that Albert paid to the total amount that Caleb and Desmond paid is 4 : 8. Find the amount paid by each of them if Bernard returned \$2.50 to Albert.

Ans : \$ _____

35. There were 210 muffin and cookies in a basket. $\frac{1}{3}$ of the muffins and $\frac{3}{5}$ of the cookies were sold. In the end, there were 100 muffins and cookies left. How many cookies were in the basket initially?

Ans : _____

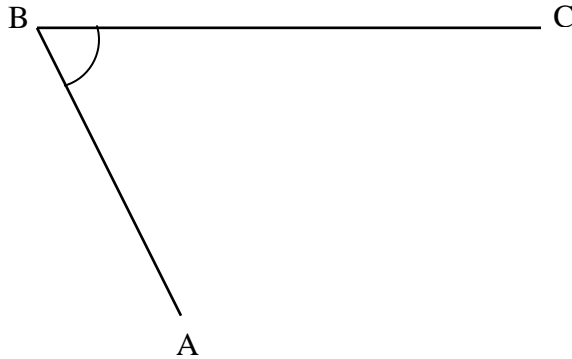


For questions **36** to **48**, show your working clearly in the space below each question and write your answers in the spaces provided.

The number of marks available is shown in brackets [] at the end of each question or part-question.

36. The figure below shows two straight lines AB and BC.

(a) Draw two lines AD and CD such that $AD \parallel BC$ and $AB \parallel CD$. [2]



(b) Measure and write down the size of $\angle ADB$

Ans : _____ [1]

37. Mrs Tan teaches 4 classes of Primary 6 pupils. There are 38 pupils in each class. She wants to give a notebook to each of her Primary 6 pupil. For every six notebooks she buys, she gets another two free.

(a) How many notebooks does she need?

(b) 6 notebooks cost \$10. What is the least amount she needs to pay?

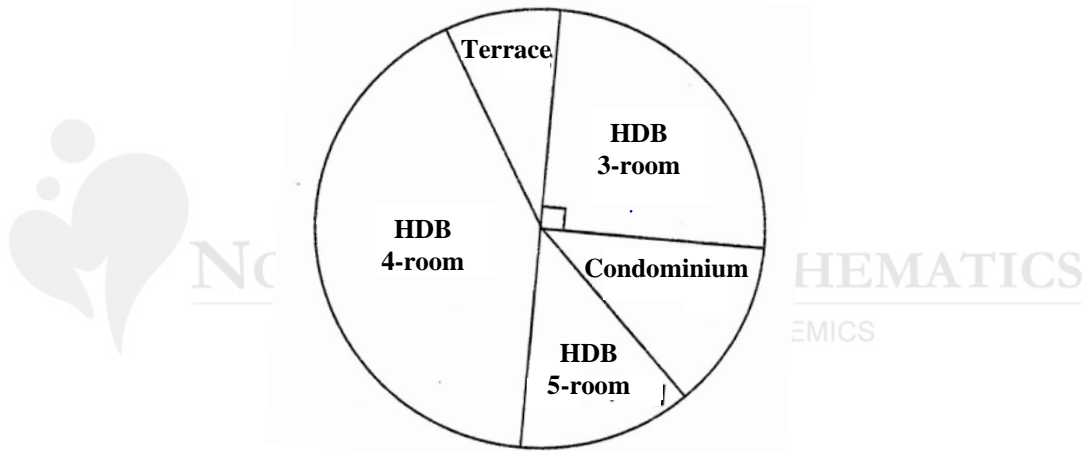
Ans : (a) _____ [1]

(b) _____ [2]

38. The floor of a room, 19m by 12m, needs to be covered with rectangular mats, each measuring 4m by 3m. What is the total number of mats needed?

Ans : _____ [3]

A survey was conducted on a group of adults to find out the types of house they are living in. The pie chart represents the result of the survey. The number of adults living in condominiums and HDB 5-room flats is the same.



- (a) 150 adults live in HDB 3-room flats. How many adults live in condominiums?
- (b) The number of adults living in 5-room flats is $\frac{5}{18}$ of the number of adults living in HDB 4-room flats. How many adults live in terrace houses?

Ans : (a) _____ [1]

(b) _____ [2]

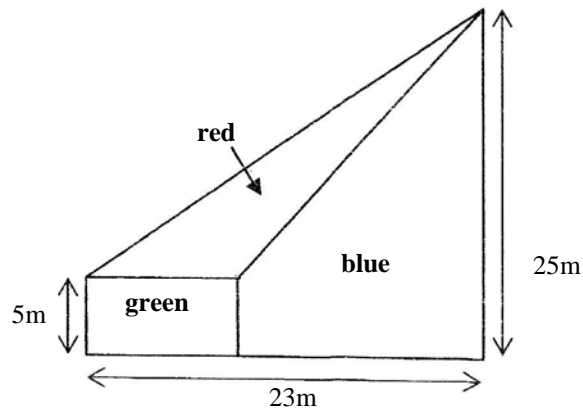
40. The number of beads in box A is 25% more than the number of beads in box B. After transferring 16 beads from box A to box B, the number of beads in box A becomes 25% fewer than the number of beads in box B. How many beads were there in box A at first?

Ans : _____ [3]

-
41. The ratio of Wendy's money to Elizabeth's money was 1 : 4. Then their mother gave Wendy \$8 and Elizabeth \$10 more. The ratio of Wendy's money to Elizabeth's became 1 : 3. How much does Wendy have in the end?

Ans : _____ [3]

42. The figure below shows trapezium shape painted in three different colours. The length of the green rectangle is thrice its breadth.



- (a) The cost of painting is \$2 per metre square. How much will it cost to paint the rectangle green?
 (b) What is the cost of painting the whole figure?



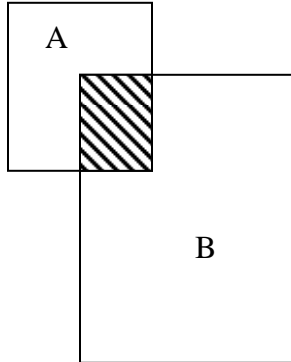
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Ans : (a) _____ [2]

(b) _____ [2]

43. Rectangle A and B are overlapped as shown in the figure below. The ratio of the area of the rectangle A to that of rectangle B is 3 : 5. The ratio of the unshaded area of rectangle A to the unshaded area of rectangle B is 1 : 3. The dimension of rectangle A is 6cm by 4cm.
- (a) What is the area of the shaded part?
- (b) What is the fraction of the area of the shaded part to that of the whole figure?



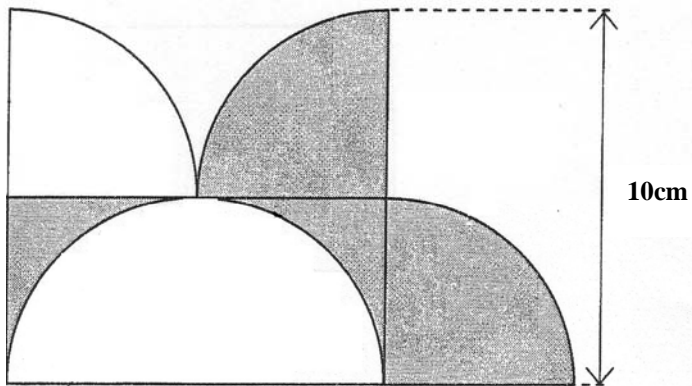
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Ans : (a) _____ [3]

(b) _____ [1]

- (a) What is the total area of the shaded parts?
(b) What is the perimeter of the whole figure?
(Take $\pi = 3.14$)



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Ans : (a) _____ [1]

(b) _____ [3]

45. 440 people took part in a swimming competition. 180 of them were children. $\frac{1}{5}$ of the men and $\frac{3}{7}$ of the women were Malays while the rest of them were Chinese. There were 16 more Chinese men than Chinese women.

(a) How many Malay women are there?

(b) What percentage of the people who took part in the swimming competition were Chinese adults?



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Ans : (a) _____ [3]

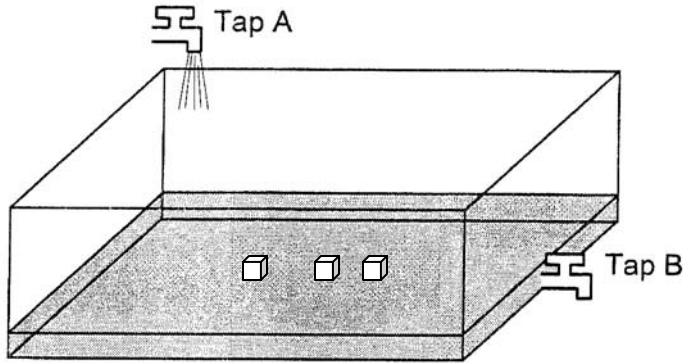
(b) _____ [2]

46. Three 2-cm cubes were placed in a rectangular tank measuring 50 cm by 40 cm by 30 cm. The tank was then filled with water to $\frac{1}{5}$ its height.

At 10 00, Tap A with water flowing out at a rate of 5ℓ per minute was turned on.

At 10 05, Tap B was turned on to drain water out of the container at a fixed rate.

At 10 09, the tank was 80% filled with water. What was the volume of water drained from Tap B per minute? ($1 \ell = 1000 \text{ cm}^3$)



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Ans : _____ [5]

47. Pauline, Ron and Susan started running round a circular track at the same time from the same starting point. Pauline and Susan jogged in a clockwise direction and Ron jogged in an anti-clockwise direction. Ron took 6 minutes to complete one round. Ron ran pass Pauline and Susan every 2 minutes and 4 minutes respectively. The jogging speed of each person remained the same throughout.
- (a) What was the ratio of Pauline's speed to Ron's speed to Susan's speed?
 - (b) When Pauline and Susan met again at the starting-point after 12 minutes, Ron had already jogged 2.4 km. What is the circumference of the circular track?



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Ans : (a) _____ [3]

(b) _____ [2]

48. Alex bought twice as many books as pens and spent \$285 in all. He spent \$45 more on pens than on books. Given that a pen cost \$3.50 more than a book, find the cost of a book.



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Ans : _____ [5]

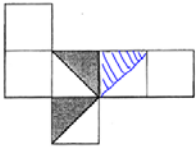
End of Paper



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PRELIMINARY EXAMINATION PAPER 01

ANSWER KEY

Qn	Answer
1	2
2	2
3	2
4	3
5	3
6	4
7	4
8	4
9	1
10	2
11	4
12	1
13	2
14	1
15	4
16	18
17	1650
18	190
19	25°

Qn	Answer
20	
21	\$180
22	W
23	C
24	1
25	$\frac{9}{20}$
26	44 cm
27	100
28	\$56
29	82 km/h
30	200%
31	45cm ²
32	18
33	756 cm ²
34	\$7.50
35	150
36	(b) 29°

Qn	Answer
37	(a) 152 notebooks (b) \$190
38	19 mats
39	(a) 75 adults (b) 30 adults
40	70 beads
41	\$22
42	(a) \$150 (b) \$690
43	(a) 16 cm ² (b) $\frac{1}{3}$
44	(a) 50 cm ² (b) 53.55 cm
45	(a) 60 Malay women (b) 40%
46	$2\frac{1}{4}\ell$
47	(a) 4 : 2 : 1 (b) 1.2 km
48	\$2

Doing well in Mathematics involve **understanding the concepts** as well as doing **more practices**. To receive more **latest school exam papers**, please log on to www.normantien.com for subscription of our latest updates.