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SIA2

**MARIS STELLA HIGH SCHOOL ( PRIMARY )  
P6 PRELIMINARY EXAMINATION  
MATHEMATICS  
26<sup>th</sup> August 2005**

**BOOKLET A**

15 questions

25 marks

Total Time For Booklets A and B : 2h 15min

NAME : \_\_\_\_\_ (      )

CLASS : PRIMARY 6 \_\_\_\_\_

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.**

**FOLLOW ALL INSTRUCTIONS CAREFULLY.**

**ANSWER ALL QUESTIONS.**

Questions 1 to 5 carry 1 mark each. Questions 6 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 correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(25 marks)

1. Express  $\frac{3}{4}$  as a percentage.

(1) 0.075%

(2) 0.75%

(3) 7.5%

(4) 75%

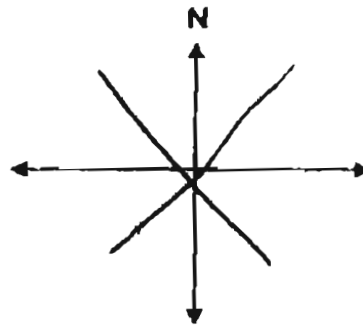
2. I am facing South-West. If I turn  $90^\circ$  anti-clockwise, which direction will I be facing?

(1) South

(2) North-East

(3) North-West

(4) South-East



3.  $60 + 12 \times (9 - 3) \div 2 =$  \_\_\_\_\_

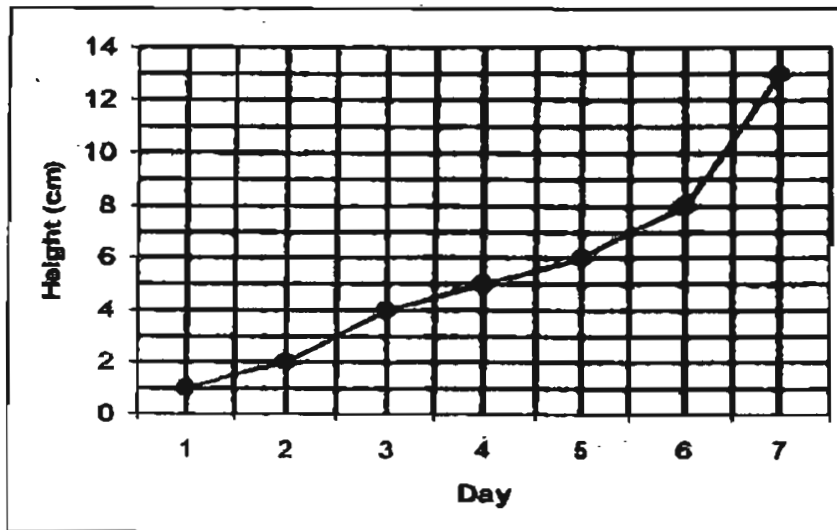
(1) 6

(2) 66

(3) 96

(4) 216

4. The line graph below shows the growth of wheatgrass seed over a period of 7 days. What was the increase in height from Day 2 to Day 7?



- (1) 2 cm  
(2) 5 cm  
(3) 11 cm  
(4) 12 cm
5. Peter saves \$3 a week. How many weeks will he take to save \$p?
- (1)  $\frac{3}{p}$   
(2)  $3p$   
(3)  $3 - p$   
(4)  $\frac{p}{3}$
6. Ivan had 1022 rubber bands. He gave  $\frac{2}{7}$  of them to Melvin. How many rubber bands had he left?
- (1) 146  
(2) 292  
(3) 438  
(4) 730

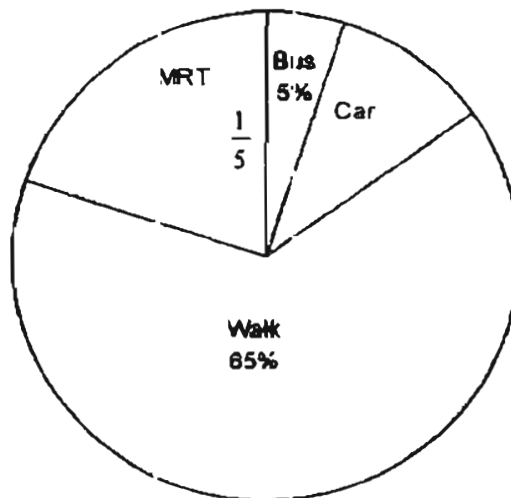
7. Ali is 3 times as heavy as Bala. Their total weight is 108 kg. What is the difference in their weight?

- (1) 27 kg
- (2) 54 kg
- (3) 72 kg
- (4) 81 kg

8. A printing machine takes 6 minutes to print 300 pages. How many pages can it print in 1 hour?

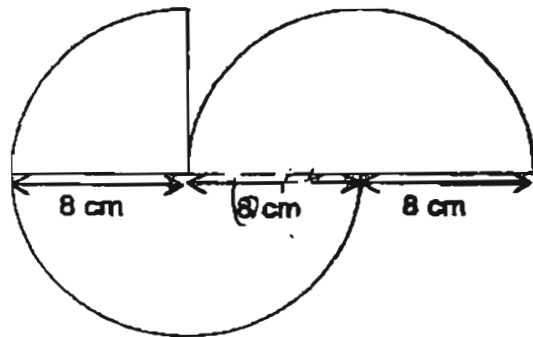
- (1) 50
- (2) 600
- (3) 1800
- (4) 3000

9. The pie chart below shows how the pupils in Class 6D travel to school. If 20 pupils travel to school by car, how many pupils travel to school by MRT?



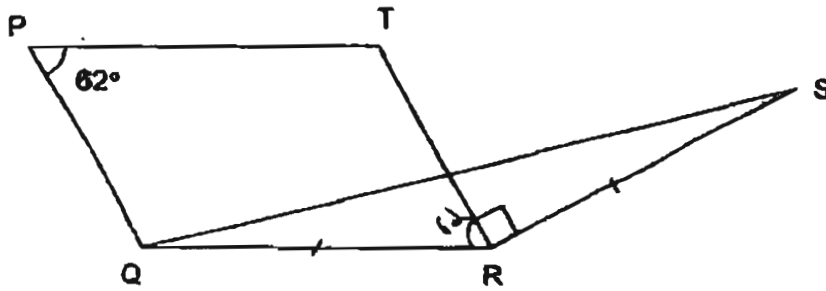
- (1) 10
- (2) 20
- (3) 40
- (4) 50

10. The figure below is made up of 2 semicircles and a quadrant with radius of 8 cm. Find the area of the figure. (Leave your answer in terms of  $\pi$ ).

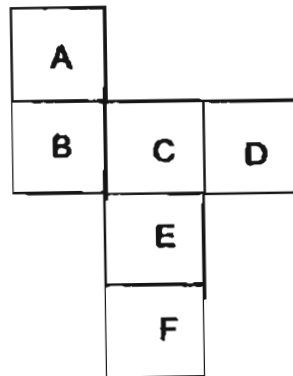


- (1)  $16\pi \text{ cm}^2$   
 (2)  $20\pi \text{ cm}^2$   
 (3)  $64\pi \text{ cm}^2$   
 (4)  $80\pi \text{ cm}^2$
11. The average weight of Benjamin and Gabriel is 32 kg. The ratio of Benjamin's weight to Gabriel's weight is 5 : 3. Find Benjamin's weight.
- (1) 8 kg  
 (2) 20 kg  
 (3) 24 kg  
 (4) 40 kg
12. Simon spent \$328 in January. In February, he spent \$50 more than in January and \$24 less than what he spent in March. What was his expenditure for the month of March?
- (1) \$276  
 (2) \$302  
 (3) \$352  
 (4) \$400

13. In the figure below, PQRT is a parallelogram.  $\angle TRS$  is  $90^\circ$  and  $QR = RS$ . Find  $\angle RQS$ .



- (1)  $14^\circ$   
 (2)  $28^\circ$   
 (3)  $59^\circ$   
 (4)  $118^\circ$
14. The figure below is a net of a cube. Which one of the faces is opposite face 'A' when it is folded?



- (1) B  
 (2) C  
 (3) D  
 (4) E
15. Peter bought a remote toy car at a discounted price of \$44. If the discount was 20%, what was the original selling price?
- (1) \$33.00  
 (2) \$35.20  
 (3) \$55.00  
 (4) \$63.80

End of Booklet A



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**MARIS STELLA HIGH SCHOOL ( PRIMARY )  
P6 PRELIMINARY EXAMINATION  
MATHEMATICS  
26<sup>th</sup> August 2005**

**BOOKLET B**

35 questions

75 marks

Total Time For Booklets A and B : 2h 15min

**NAME :** \_\_\_\_\_ (      )

**CLASS : PRIMARY 6** \_\_\_\_\_

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.**

**FOLLOW ALL INSTRUCTIONS CAREFULLY.**

**ANSWER ALL QUESTIONS.**

**MARKS OBTAINED :**

**BOOKLET A :** \_\_\_\_\_ / 25

**BOOKLET B :** \_\_\_\_\_ / 75

**TOTAL :** \_\_\_\_\_ / 100

**Parent's Signature :** \_\_\_\_\_

Questions 16 to 35 carry 1 mark each. Write your answers in the spaces provided.  
Give your answers in the units stated.

(20 marks)

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16. Write 5 tens, 7 ones and 12 hundredths in numerals.

Answer : \_\_\_\_\_

17. There are 15 girls and 21 boys in a class. What fraction of the pupils in the class are girls? Express your answer in its simplest form.

Answer : \_\_\_\_\_

18. Find the value of  $\frac{1}{4} \div 6$ .

Answer : \_\_\_\_\_

19. What is  $875 \div 4$ ? Express your answer correct to 1 decimal place.

Answer : \_\_\_\_\_

20. James bought  $\frac{1}{2}$  kg of fish at \$0.90 per 200g. How much did he pay for the fish?

Answer : \$ \_\_\_\_\_





21. Arrange the following fraction in ascending order.

$$\frac{9}{2}, \frac{9}{5}, \frac{9}{4}, \frac{9}{7}$$

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Answer : \_\_\_\_\_

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22. Jane spent  $\frac{1}{5}$  of her money on transport and  $\frac{1}{4}$  of the remainder on food. What fraction of her money was left? Express your answer in the simplest form.

Answer : \_\_\_\_\_

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23. If 40% of a number is 60, what is the number?

Answer : \_\_\_\_\_

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24. There are 4 times as many ducks as chickens in a farm. If there are 105 chickens, how many more ducks than chickens are there?

Answer : \_\_\_\_\_

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25. The table below shows the result of a survey on the number of visits made by some Primary 6 pupils to the Library last month. How many pupils visited the library at least 10 times last month?

No. of visits	5	8	9	10	12
No. of pupils	10	16	15	11	20

Answer : \_\_\_\_\_

26. The base of a triangle is  $4k$  cm. Its height is 6 cm. Express the area of the triangle in terms of  $k$ .

Answer : \_\_\_\_\_  $\text{cm}^2$

27. The ratio of the perimeter of Square A to the perimeter of Square B is 4 : 5. If the perimeter of Square B is 85 cm, find the difference between the perimeters of the two squares.

Answer : \_\_\_\_\_ cm

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28. Melli was given \$6 to buy three 50-cent stamps and some 22-cent stamps. What is the maximum number of 22-cent stamps that he can buy?

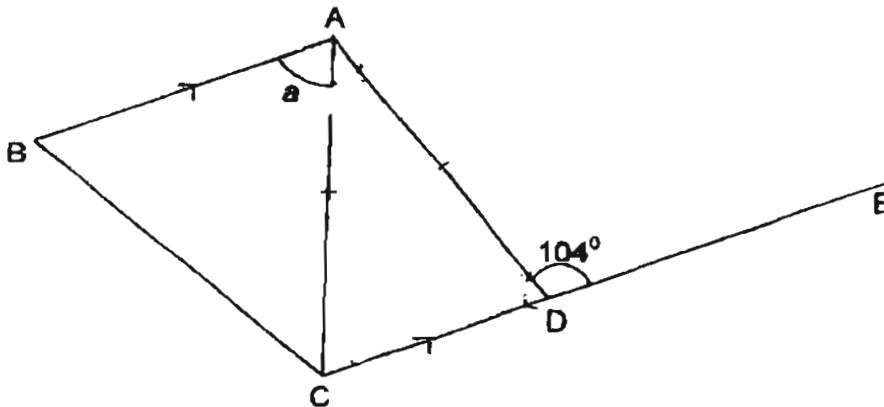
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Answer : \_\_\_\_\_

29. A movie lasted  $1\frac{1}{2}$  hours. It ended at 10.25 a.m. At what time did the movie start?

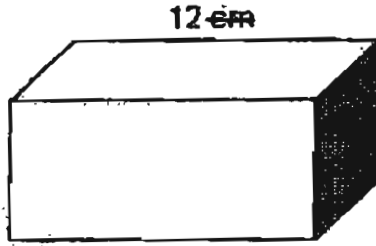
Answer : \_\_\_\_\_ a.m.

30. In the figure below, not drawn to scale, ABCD is a trapezium.  $AB \parallel CD$ ,  $AC = AD$  and CDE is a straight line. Find  $\angle a$ .



Answer : \_\_\_\_\_ °

31. The shaded face of the cuboid below has an area of  $48 \text{ m}^2$ . Find the volume of the cuboid.



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Answer : \_\_\_\_\_  $\text{m}^3$

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32. How many eighths are there in  $2\frac{3}{4}$  ?

Answer : \_\_\_\_\_

---

33. Find the value of  $2x^2 - 3x$  when  $x = 4$ .

Answer : \_\_\_\_\_

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space

34. Brandon had 1.05 kg of mushrooms. He used 650 g of them. How many kilograms of mushrooms had he left?

Answer : \_\_\_\_\_ kg

35.  $\frac{1}{2}$  of Maggie's savings is equal to  $\frac{3}{5}$  of Johari's savings. Express Johari's savings as a fraction of Maggie's savings.

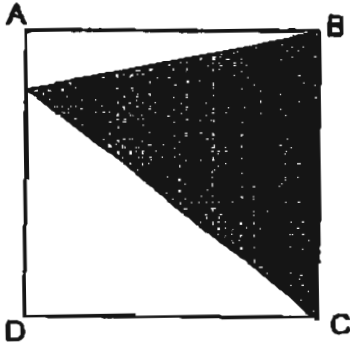
Answer : \_\_\_\_\_

For Questions 36 to 50, show your working clearly in the space below each question and write your answer in the spaces provided. The number of marks available is shown in the brackets ( ) at the end of each question or part-question.

(55 marks)

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36. The square ABCD below has an area of  $64 \text{ cm}^2$ . Find the area of the shaded part.



Answer: \_\_\_\_\_ [2]

37. Jiemin used  $\frac{3}{8}$  of his savings to buy a gift for his mother. If the gift cost \$168, how much savings did Jiemin have at first?

Answer: \_\_\_\_\_ [2]

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space

38. Construct a rhombus ABCD with AB = 4 cm and  $\angle ABC$  of  $60^\circ$ .



[2] 0

39. Mrs Chong baked some tarts. She sold  $\frac{2}{5}$  of them in the morning and  $\frac{3}{4}$  of the remainder in the afternoon. She sold 80 more tarts in the afternoon than in the morning. How many tarts did she bake altogether?

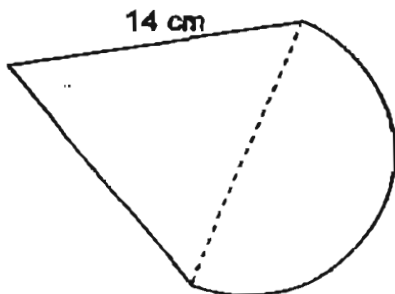
Answer. \_\_\_\_\_ [3]

40. Linda and Weiwen both drove a distance of 120 km from Town X to Town Y. Weiwen started her journey 30 minutes later than Linda. They reached Town Y at the same time. If Weiwen's average speed was 80 km/h, find Linda's average speed.

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Answer \_\_\_\_\_ [3]

41. The figure below, not drawn to scale, is made up of an equilateral triangle and a semi-circle. Find the perimeter of the figure below. (Take  $\pi = \frac{22}{7}$ )



Answer \_\_\_\_\_ [3]



42. There are 100 people in a hall. 80 of them speak English. 70 of them can speak Mandarin. 10 of them can speak neither English nor Mandarin. How many people in the hall can speak both English and Mandarin?

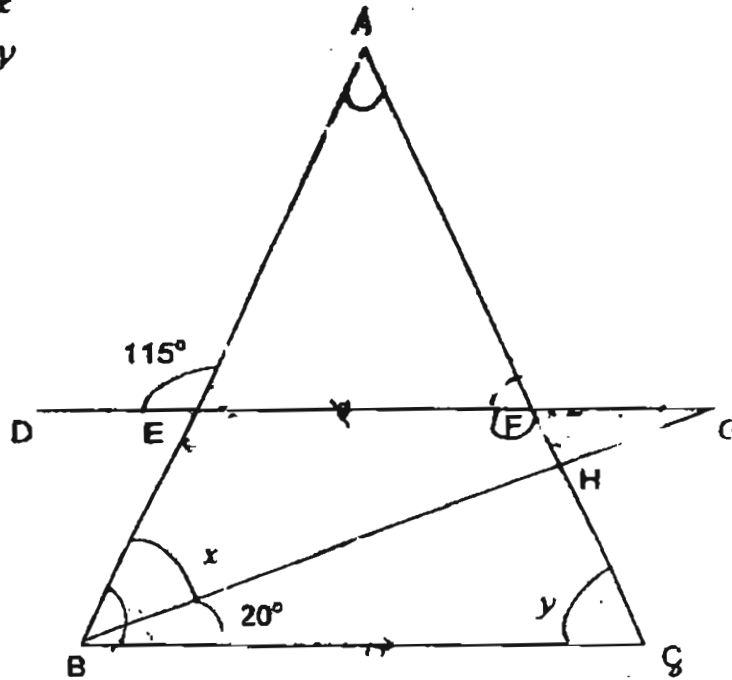
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Answer: \_\_\_\_\_ [4]

Do not write

43. In the figure, not drawn to scale,  $ABC$  is an isosceles triangle.  $AB = AC$ ,  
 $DG \parallel BC$ ,  $DEFG$  and  $BHG$  are straight lines.

- Find a)  $\angle x$   
 b)  $\angle y$



in this  
space

Answer a) \_\_\_\_\_ [2]

b) \_\_\_\_\_ [2]

44. Anne had some stickers. The number of blue stickers she had was  $\frac{5}{6}$  the number of red stickers. After buying another 30 of each type of stickers, the number of blue stickers she had became  $\frac{7}{8}$  the number of red stickers. How many red stickers did Anne have at first?

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space

Answer : \_\_\_\_\_ [4]

45. Alvin and Joseph were driving at uniform speeds towards each other. They were 600 km apart at 8 am. They passed each other at 11 am. Alvin was driving at 90 km/h, find Joseph's speed.

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Answer: \_\_\_\_\_ [4]

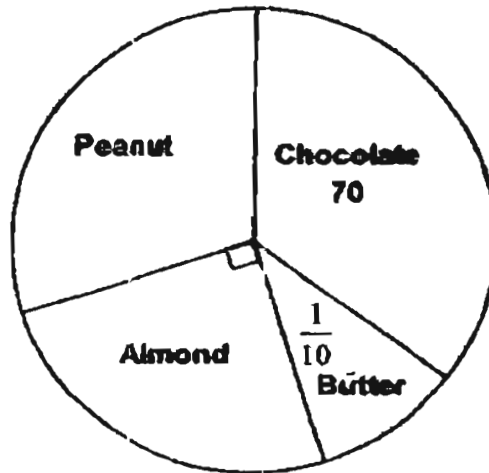
46. Sean is reading a book. The number of pages he has read to the number of pages he has not read is 1 : 4. If he reads another 33 pages, the number of pages he has read will become 80% of the number of pages he has not read. How many pages does the book consist of?

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space

Answer: \_\_\_\_\_ [4]

47. A group of 200 people were asked to choose the type of cookies they like. The pie chart below represents their choices.

- a) How many people liked peanut cookies?
- b) How many more percent of the people liked peanut cookies than almond cookies?



Do not write in this space

Answer : a) \_\_\_\_\_ [3]

b) \_\_\_\_\_ [2]

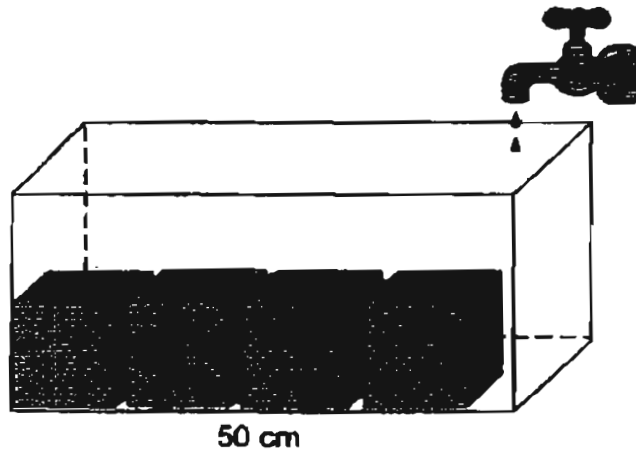
48. A library had 4800 books. The ratio of the number of English to the number of Chinese books to the number of Malay books were in the ratio 7 : 6 : 3. When 1095 new books were purchased, the number of English books increased by 20% and the number of Malay book increased by 15%. How many Chinese books are there now?

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Answer: \_\_\_\_\_ [5]

49. Mr Chan put 4 metal cubes of edge 10 cm into an empty rectangular tank, 50 cm long and 40 cm wide. He then filled it up with water flowing from a tap at a rate of 12 litres per minute. If it takes 4 minutes to fill up the tank, find the height of the tank. (1 litre = 1000 cm<sup>3</sup>)

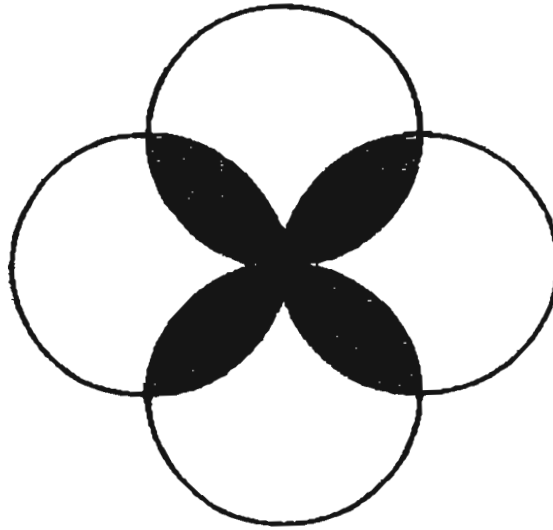
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Answer: \_\_\_\_\_ [5]



50. The figure below shows four identical circles overlapping each other. The radius of each of the circles is 10 cm. Find the total area of the shaded parts.  
(Take  $\pi = 3.14$ )



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Answer: \_\_\_\_\_ [5]

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End of Paper



MARIS STELLA HIGH SCHOOL (PRIMARY)  
PRIMARY SIX  
PRELIMINARY EXAMINATION  
MATHEMATICS

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- |   |                              |
|---|------------------------------|
| 1) 4  | 28) 20                       |
| 2) 4  | 29) 8.55                     |
| 3) 3  | 30) 76                       |
| 4) 3  | 31) 576                      |
| 5) 4  | 32) 22                       |
| 6) 4  | 33) 20                       |
| 7) 2  | 34) 0.4                      |
| 8) 4  | 35) $\frac{5}{6}$            |
| 9) 3  | 36) $32 \text{ cm}^2$        |
| 10) 4   | 37) \$ 448                   |
| 11) 4   | 38)                          |
| 12) 4   | 39) 1600 tarts               |
| 13) 1   | 40) 60 km/h                  |
| 14) 4   | 41) 50 cm                    |
| 15) 3   | 42) 60                       |
| 16) 57.12   | 43) $45^\circ$<br>$65^\circ$ |
| 17) $\frac{5}{12}$  | 44) 90 red stickers          |
| 18) $\frac{1}{24}$  | 45) 110 km/h                 |
| 19) 218.8   | 46) 135 pages                |
| 20) 2.25  | 47) a) 60    b) 20%          |
| 21) $\frac{9}{7}$ $\frac{9}{5}$ $\frac{9}{4}$ $\frac{9}{2}$ | 48) 2340                     |
| 22) $\frac{3}{5}$   | 49) 26 cm                    |
| 23) 150   | 50) 228                      |
| 24) 315   |                              |
| 25) 31  |                              |
| 26) 12k   |                              |
| 27) 17  |                              |