

SAT

Name : _____ ()

18 May 2005

Class : Pr. 6 ()



CATHOLIC HIGH SCHOOL

MID YEAR EXAMINATION 2005

PRIMARY SIX

MATHEMATICS

EM1/ EM2

BOOKLET A

15 questions

25 marks

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

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

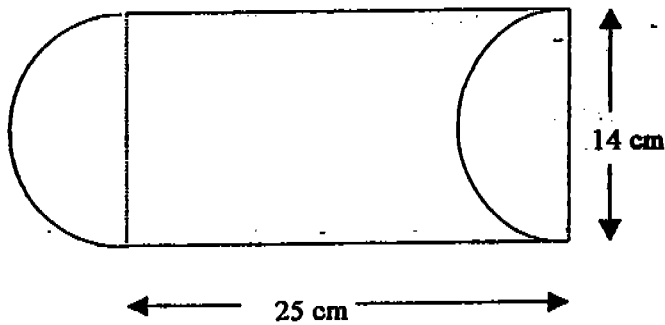
Answer all questions.

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 on the Optical Answer Sheet.
(25 marks)

1. Which one of the following has the digit 3 in the ten thousands place?

- (1) 2 345 056
- (2) 3 467 021
- (3) 6 473 150
- (4) 8 234 190

2. The figure, not drawn to scale, is made up of 2 straight lines and 2 equal semi-circles.
Find its perimeter. [Take $\pi = \frac{22}{7}$.]



The perimeter of the figure is _____ cm.

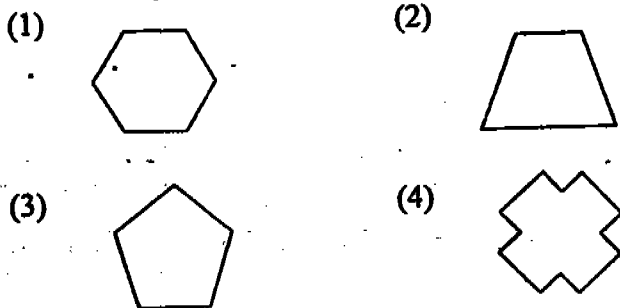
- (1) 44
- (2) 50
- (3) 94
- (4) 122

3. Ronald's examination marks for 4 subjects are shown in the table below. Which 2 subjects have the least difference in marks?

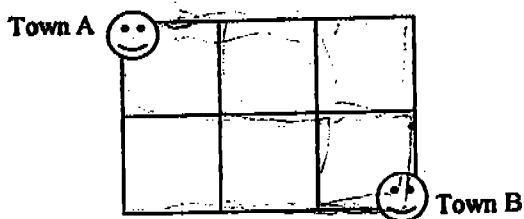
English	Chinese	Math	Science
59	48	68	51

- (1) Math and Science
- (2) English and Math
- (3) Chinese and Math
- (4) Chinese and Science

4. Which one of the following figures has perpendicular lines?



5. Ali needs to get from Town A to Town B. He can only move either in the east or south direction. How many different routes can he take to reach Town B from Town A?



- (1) 2
- (2) 6
- (3) 10
- (4) 12
- (S)

6. An oven was sold for \$510 after a 15% discount. What was the original price of the oven before the discount?

- (1) \$433.50
 - (2) \$600
 - (3) \$680
 - (4) \$3400
-

7. A mango cost p cents each. Mr Tan bought 10 mangoes and gave the fruitseller \$20. How much change did he receive?

- (1) $\$ \left(20 - \frac{p}{10} \right)$
 - (2) $\$ (20 - 10p)$
 - (3) $(20 - 10p) \text{¢}$
 - (4) $(2000 - 10p) \text{¢}$
-

8. Mdm Leow spent $\frac{1}{3}$ of her money on a blouse and $\frac{1}{4}$ of the remainder on a wallet. What fraction of her money had she left?

- (1) $\frac{1}{2}$
 - (2) $\frac{1}{6}$
 - (3) $\frac{1}{7}$
 - (4) $\frac{1}{12}$
-

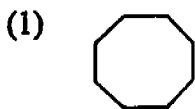
9. There are four boxes of biscuits. Box A has fewer biscuits than Box B. Box D has more biscuits than Box A. Box C has fewer biscuits than Box B but more biscuits than Box D. Which box has the most biscuits?

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

10. 4 ducks cost \$72 and 6 chickens cost \$90. How much do 8 chickens and 6 ducks cost altogether?

- (1) \$192
 - (2) \$228
 - (3) \$234
 - (4) \$324
-

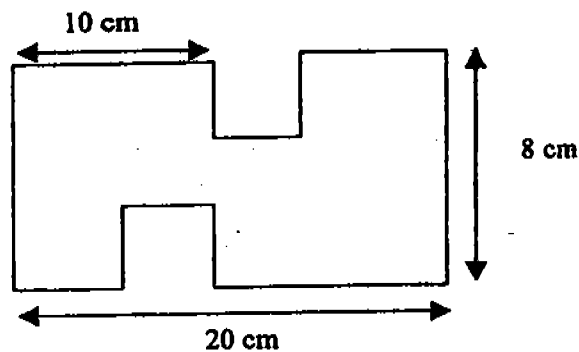
11. Which one of the following shapes can tessellate?



12. John took part in a 8-km walkathon. He walked at an average speed of 3 km/h for the first $\frac{3}{4}$ of the journey and an average speed of 4 km/h for the remaining journey. Find the time taken to complete the walkathon.

- (1) $1\frac{1}{8}$ h
(2) $2\frac{1}{4}$ h
(3) $2\frac{1}{2}$ h
(4) 4 h

-
13. The figure below shows a rectangle measuring 20 cm by 8 cm. Two 3-cm squares have been cut from the figure. Find the perimeter of the remaining figure.

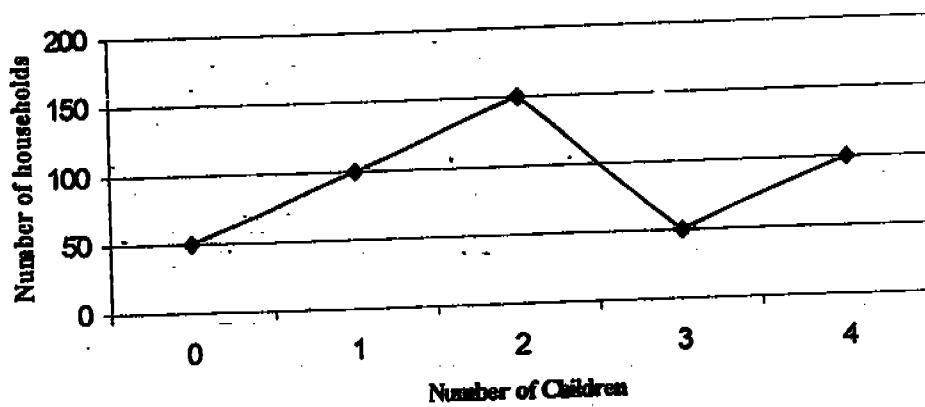


- (1) 56 cm
(2) 68 cm
(3) 160 cm
(4) 142 cm

14. The angles in a triangle are in the ratio 4 : 3 : 5. What is the size of the biggest angle?

- (1) 37.5°
- (2) 45°
- (3) 75°
- (4) 150°

15. The ~~bar~~^{line} graph below shows the number of households with children. If $\frac{3}{5}$ of the total number of children are boys, how many girls are there?



- (1) 180
- (2) 190
- (3) 270
- (4) 380

Name : _____ ()

18 May 2005

Class : Pr. 6 ()



CATHOLIC HIGH SCHOOL

MID YEAR EXAMINATION 2005

PRIMARY SIX

**MATHEMATICS
EM1/ EM2**

BOOKLET B

35 questions

75 marks

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

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Marks obtained for Booklet A	25
Marks obtained for Booklet B	75
Total Marks	100

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

(20 marks)

Do not write
in this space

16. $\frac{4}{7} + \frac{2}{7} + \frac{3}{7} = \square \times \frac{1}{7}$

What is the missing number in the box?

Answer : _____

17. The value of $36 \div (4 + 2) - 3 \times 2$ is _____.

Answer : _____

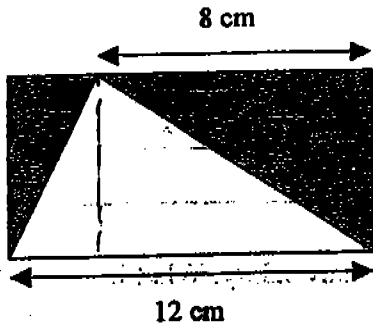
18. Simplify $2h + 4 - h + 1$.

Answer : _____

SCORE

Do not write
in this space

19. ABCD is a rectangle. What fraction of the rectangle is shaded?



Answer: _____

20. What is the digit in the ones place in the value of $9 \times 99 \times 999 \times \dots \times 9\,999\,999\,999$?

Answer: _____

21. The area of a square is $16b^2 \text{ cm}^2$. What is the length of each side of the square if $b = 3 \text{ cm}$?

Answer: _____ cm

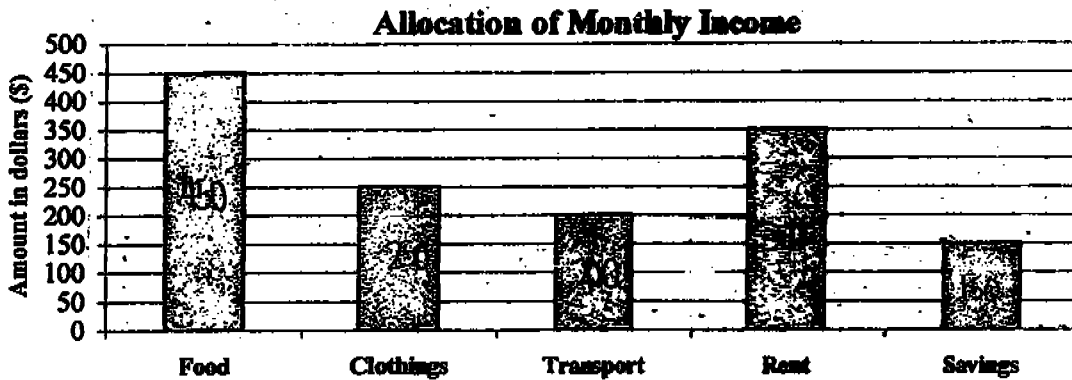
SCORE

22. The ratio of $\frac{2}{5}$ h to 40 min is _____.

Do not write
in this space

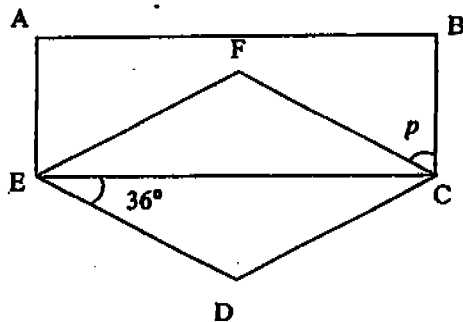
Answer : _____

23. The following graph shows how Sally allocates her monthly salary. What is her monthly salary?



Answer : \$ _____

24. In the figure, not drawn to scale, ABCE is a rectangle and CDEF is a rhombus. Find $\angle p$.



Answer : _____°

SCORE

25. The average height of 4 girls is 1 m 30 cm. After another girl joined the group, the average height becomes 1 m 27 cm. Find the height of the fifth girl in centimetres.

Do not write
in this space

Answer : _____ cm

26. Given that $A : B = 3 : 4$ and $B : C = 2 : 3$, find $A : C$. Give your answer in the simplest form.

Answer : _____

27. _____ % of 70 = 14. What is the missing number in the blank?

Answer : _____

SCORE

Do not write
in this space

28. A feather weighs $1\frac{7}{12}$ g. Another feather weighs $2\frac{1}{4}$ g. Find their difference in weight. (Leave your answer as a fraction in its lowest term.)

Answer : _____ g

29. Arrange the following in ascending order.

$\frac{5}{4}$, 1.13 , $\frac{6}{7}$, 60%

Answer : _____

30. A rectangle has an area of 1978 cm^2 . Its breadth is 23 cm. What is its length?

Answer : _____ cm

SCORE

Do not write
in this space

31. Water is leaking at a constant rate from a tank that is totally filled with water. At 3 p.m., it is $\frac{2}{3}$ full. At 4 p.m., it is $\frac{1}{2}$ full. At what time will the tank be emptied?

Answer : _____ p.m.

32. The average of Tom and his father's age is 30 years. Given that Tom is $\frac{1}{4}$ as old as his father, how old is Tom now?

Answer : _____ yrs

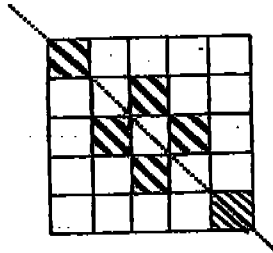
SCORE

33. 4 boys can paint a room in 3 h. How long will 6 boys take to paint the same room assuming that they paint at the same speed?

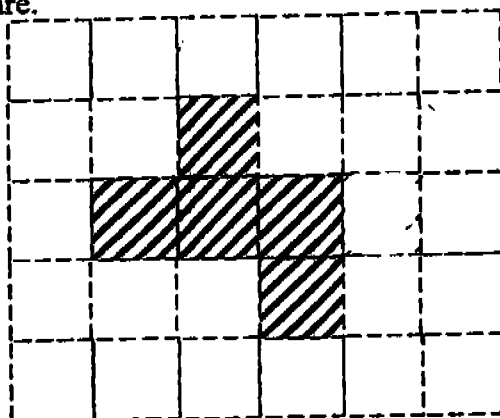
Do not write
in this space

Answer : _____ h

34. The figure is made up of 25 squares. 5 of the squares are shaded. The dotted line is a line of symmetry. To have 2 lines of symmetry, another square needs to be shaded. Shade the square.



35. The figure shows an incomplete net of a cube. Complete the net by shading 1 more square.



SCORE

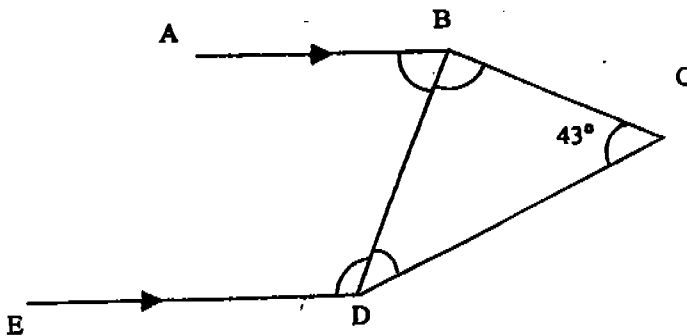
For questions 36 to 50, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part-question. (55 marks)

36. Caleb is 8 years old and his mother is 36 years old. In how many years will Caleb's mother be thrice as old as he?

Do not write in this space

Answer: _____ [2]

37. In the figure (not drawn to scale), AB is parallel to ED. Find $\angle ABC + \angle EDC$.



Answer: _____ [2]

SCORE

38. Kennedy has 2 children. He is 5 times as old as his son. His daughter is 3 years older than his son. If Kennedy is k years old now, what is the age of his daughter?

Do not write
in this space

Answer: _____ [2]

39. Mr Tan spent \$1250 of his salary on a television and $\frac{1}{4}$ of the remainder on a DVD player. If he is left with $\frac{1}{3}$ of his salary, how much was his salary?

Answer: _____ [3]

SCORE

40. a) In the space provided, draw a triangle ABC in which $BC = 7$ cm, $AC = 4$ cm and $\angle BCA = 120^\circ$.

Do not write
in this space

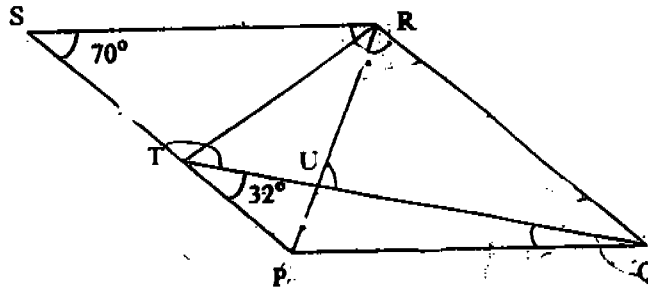
B

[2]

- b) Measure and write down the length of AB.

Answer: b) _____ [1]

41. In the figure, not drawn to scale, PQRS is a rhombus.
 $\angle TSR = 70^\circ$ and $\angle PTU = 32^\circ$.
 Find a) $\angle PQT$
 b) $\angle RUQ$



Answer: a) _____ [2]

b) _____ [1]

SCORE

42. Gladys bought 5 times as many pencils as marker pens. She spent \$20 altogether. The total cost of pencils was \$5 more than the total cost of marker pens. A marker pen cost \$1 more than a pencil. Find the cost of a marker pen.

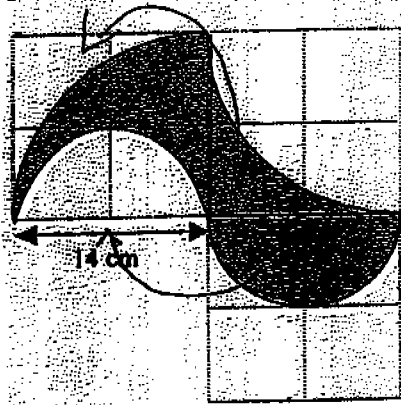
Do not write
in this space

Answer: _____ [4]

SCORE

43. The following figure, not drawn to scale, is formed on ten grid squares. Find the area of the shaded part. [Take $\pi = \frac{22}{7}$]

Do not write in this space

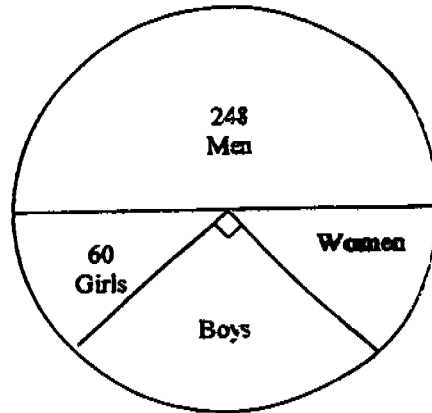


Answer: _____ [4]

SCORE

44. The pie chart below shows the number of audience at a concert.

Do not write
in this space



- a) How many more boys than girls were at the concert?
b) What fraction of the total audience were women?

Answer: a) _____ [2]

b) _____ [2]

SCORE

45. Daniel had some chickens and ducks. There were 200 more chickens than ducks. After selling 300 ducks and buying 40 chickens, he had $\frac{1}{4}$ as many ducks as chickens. How many chickens did he have at first?

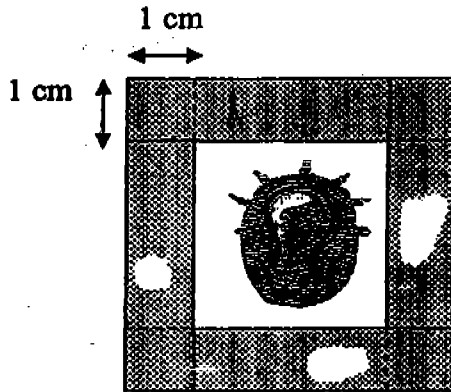
Do not write
in this space

Answer: _____ [4]

SCORE

46. A square picture is pasted on a square card. Given that the border around the square picture is 1 cm wide and has an area of 36 cm^2 , find the area of the picture.

Do not write in this space



Answer: _____ [4]

SCORE

47. Xavier, Yati and Zachary shared some marbles. Xavier had $\frac{1}{3}$ of what Yati and Zachary had. Yati had $\frac{1}{5}$ of what Xavier and Zachary had. Xavier had 24 fewer marbles than Zachary. How many marbles did they have altogether?

Do not write
in this space

Answer: _____ [5]

SCORE

48. The number of twenty-cent coins in a box was $\frac{1}{3}$ the number of fifty-cent coins. 8 fifty-cent coins were taken out and exchanged for twenty-cent coins which were put into the box. The number of fifty-cent coins became $\frac{4}{7}$ the number of twenty-cent coins. How much money was there in the box?

Do not write
in this space

Answer: _____ [5]

SCORE

49. Mr Kabil is going to deliver some vegetables from his home to a market in town. If he travels at an average speed of 20 km/h, he will reach the market at 1 p.m. If he travels at an average speed of 30 km/h, he will reach the market at 11 a.m. What should his average speed be if he wants to reach the market at 12 noon?

Do not write
in this space

Answer: _____ [5]

SCORE

50. Ahmad has 50% more money than Bernard. Bernard has 20% more money than Clement. After Ahmad gives Bernard and Clement a total of \$350, and Bernard gives Clement \$400, the ratio of Ahmad's money to Bernard's money to Clement's money becomes 1 : 1 : 3. How much money did Ahmad give to Bernard?

Do not write
in this space

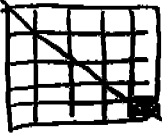

Answer: _____ 25]

--- END ---

SCORE

SAT

CATHOLIC HIGH SCHOOL (PRIMARY)
 MID YEAR EXAMINATION 2005
 PRIMARY SIX
 MATHEMATICS

- 1) 4
 2) 3
 3) 4
 4) 4
 5) 3
 6) 2
 7) 4
 8) 1
 9) 2
 10) 2
 11) 2
 12) 3
 13) 2
 14) 3
 15) 4
 16) 9
 17) 0
 18) $h + 5$
 19) $1/2$
 20) 1
 21) 12
 22) 3 : 5
 23) 1,400
 24) 54
 25) 115
 26) 1 : 2
 27) 20
 28) $2/3$
 29) 60% $6/7$ 1.13 $5/4$
 30) 86
 31) 7
 32) 12
 33) 2
 34) 
 35) 
 36) 6 years
 37) 317°
 38) $(\frac{k}{5} + 3)$ years old
 39) \$ 2250
 40) b) 9.5 cm
 41) 38° b) 93°
 42) \$ 1.50
 43) 196 cm^2
 44) a) 64 b) $4/31$
 45) 680 chickens
 46) 64 cm^2
 47) 72 marbles
 48) \$ 13.60
 49) 24 km/h
 50) \$ 260

52