CEDAR PRIMARY SCHOOL

CLASS TEST TWO

MATHEMATICS

PRIMARY 6

Date: 12 May 2023

11 QUESTIONS

TOTAL TIME: 50 min

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.

2. Follow all instructions carefully.

3. Answer all questions.

4. Use a dark blue or black ballpoint pen to write your answers in the space provided for each question.

5. Do not use correction fluid/tape or highlighters

6. You are allowed to use a calculator.

Name : _____ ( )

Class : Primary 6 _____

Parent's Signature: _____

Marks
35

This booklet consists of **10** printed pages.

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

1.

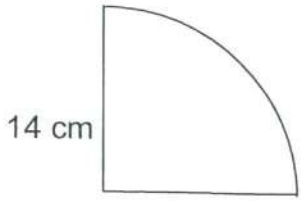
The usual price of a watch is $520. What is the sale price?

Ans: $ _____

2. Every customer has to pay an 8% GST on their purchases. The price of a television set without GST is $850. What is the amount a customer must pay for buying the television set?

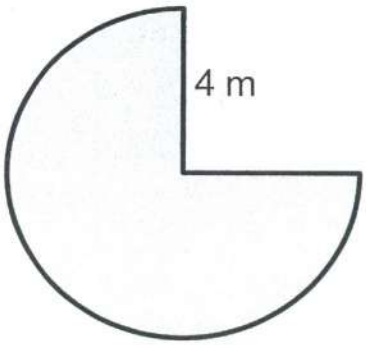
Ans: $_____

3. Find the perimeter of the quadrant shown. (Take $\pi = \frac{22}{7}$)



Ans: _____cm

4. Find the area of the three-quarter circle shown in the diagram. (Take $\pi = 3.14$)



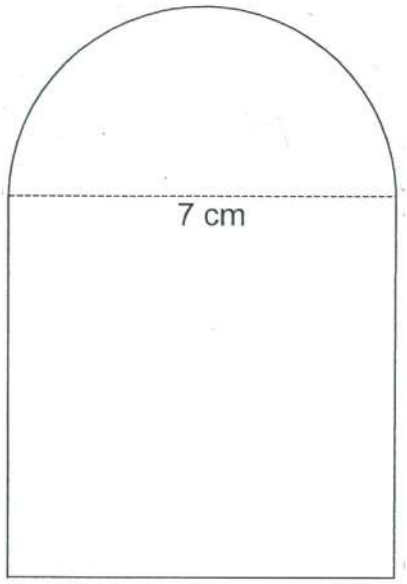
Ans: _____m^2

5. During a sale, a bookseller reduced the price of his books by 10%. The sale price of a book is $13.50. What was the usual price of this book?

Ans: $_____

For Questions 6 to 11, show your working clearly in the space provided for each question. 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. (25 marks)

6. The figure below is made up of a square and a semi-circle. Find the area and perimeter of the figure, correct to 2 decimal places. (Take $\pi = 3.14$)



Ans: Area =_____ [2]

Perimeter = _____ [1]

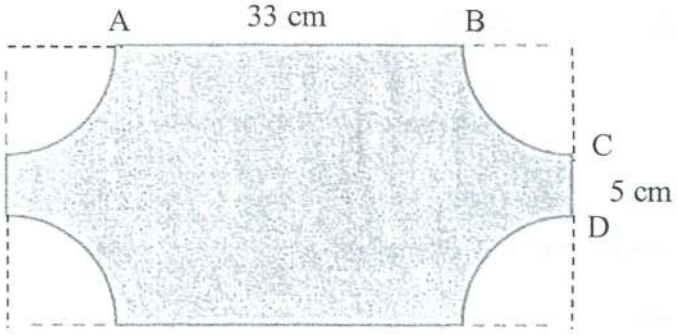
7. Three brothers, Alan, Bala and Chandra, share a sum of money. Alan has 40% of the sum of money. Bala got 4 times as much as Chandra. Bala has $60 more than Alan.

(a) What percentage of the sum of money did Chandra get?
(b) How much money did Alan get?

Ans: (a) _____ [2]

(b) _____ [2]

8. The figure below shows a rectangle with its corners cut off. The ratio of the length of the rectangle to its breadth is 12 : 5. Each of the 4 identical corners that has been cut off is a quarter circle. The length AB is 33 cm and the length of CD is 5 cm.



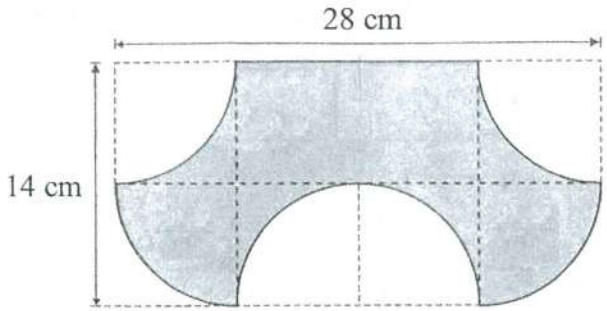
(a) What is the radius of each quarter circle?

(b) What is the perimeter of the shaded part? (Take $\pi = 3.14$)
(Give your answer correct to 1 decimal place.)

Ans: (a) _____ [2]

(b) _____ [2]

9. The shaded figure shown below is formed by a straight line and 6 identical quarter circles.



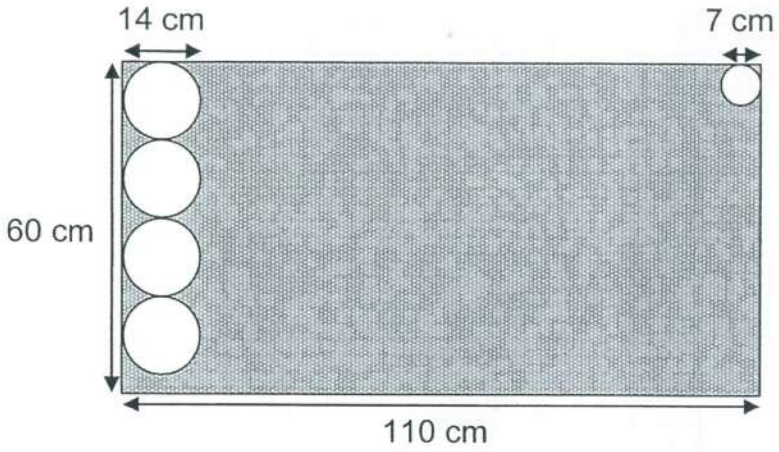
(a) Find the radius of each quarter circle.

(b) Find the area of the shaded figure. (Take $\pi = \frac{22}{7}$)

Ans: (a) _____ [1]

(b) _____ [3]

10. Ali had a piece of rectangular paper. He cut out four bigger circles with a diameter of 14 cm at first. Then, he cut as many smaller circles with a diameter of 7 cm as he could.



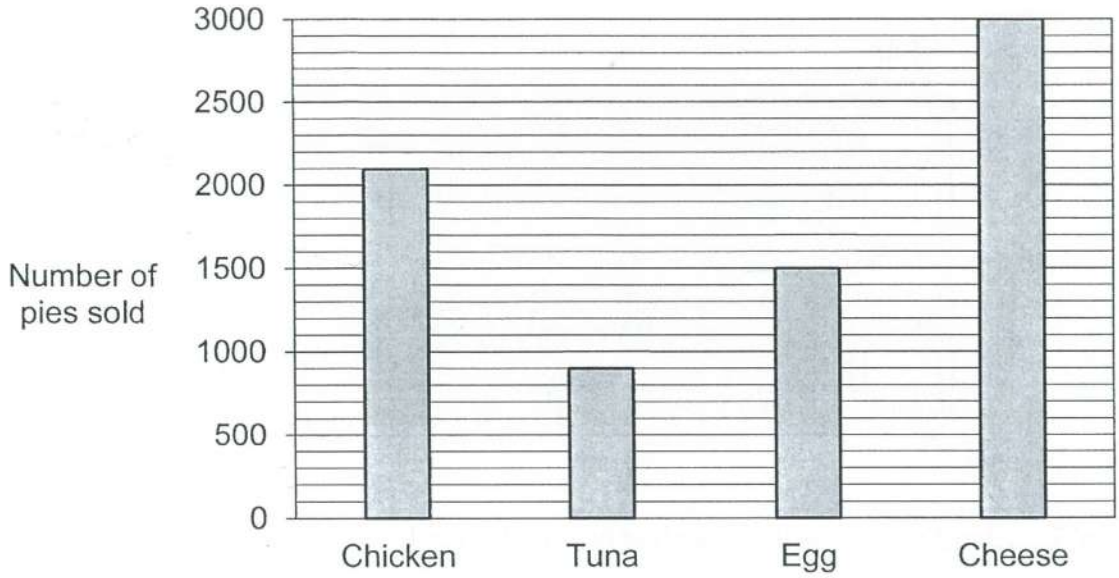
(a) What was the greatest number of smaller circles Ali could cut?

(b) Find the area of the paper left. Take $\pi = \frac{22}{7}$.

Ans: (a) _____ [2]

(b) _____ [3]

11. The bar graph below shows the number of each type of pie sold at a bakery in a week.



(a) What percentage of pies sold at the bakery were tuna pies?

(b) All the cheese pies were packed into boxes of 3 or 5. There were 718 boxes in all. How many boxes contained 5 cheese pies?

Ans: (a) _____ [2]

(b) _____ [3]

END OF CLASS TEST

CEDAR PRIMARY SCHOOL

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1.

The usual price of a watch is $520. What is the sale price?

$$60\% \times 520 = \frac{60}{100} \times 520$$
$$= \$312$$

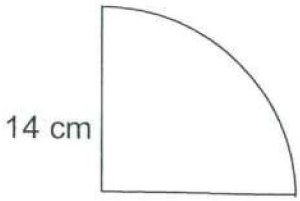
Ans: $ 312

2. Every customer has to pay an 8% GST on their purchases. The price of a television set without GST is $850. What is the amount a customer must pay for buying the television set?

$$100\% \rightarrow \$850$$
$$1\% \rightarrow \$850 \div 100$$
$$= \$8.50$$
$$8\% \rightarrow \$8.50 \times 8$$
$$= \$68$$
$$108\% \rightarrow \$850 + \$68$$
$$= \$918$$

Ans: $ 918

3. Find the perimeter of the quadrant shown. (Take $\pi = \frac{22}{7}$)



$$\text{Perimeter} = \frac{1}{4} \times 2 \times \frac{22}{7} \times 14 + 14 \times 2$$
$$= 22 + 28$$
$$= 50\ cm$$

Ans: 50 cm

4. Find the area of the three-quarter circle shown in the diagram. (Take $\pi = 3.14$)

$$\text{Area} = \frac{3}{4} \times 3.14 \times 4 \times 4$$
$$= 37.68\ m^2$$

Ans: 37.68 m^2

5. During a sale, a bookseller reduced the price of his books by 10%. The sale price of a book is $13.50. What was the usual price of this book?

$90\% \rightarrow \$13.50$

$10\% \rightarrow \$13.50 \div 9$

$= \$1.50$

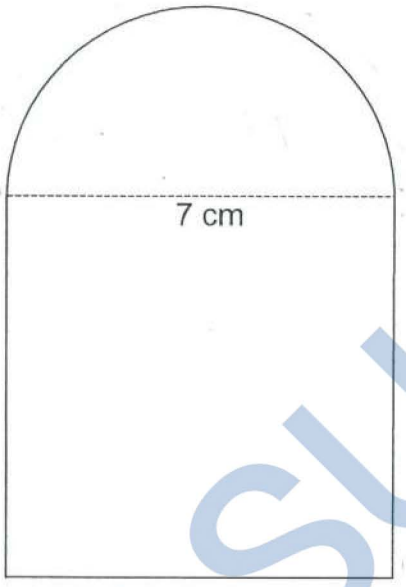
$100\% \rightarrow \$1.50 \times 10$

$= \$15$

Ans: $\_\_\_\_15\_\_\_\_$

For Questions 6 to 11, show your working clearly in the space provided for each question. 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. (25 marks)

6. The figure below is made up of a square and a semi-circle. Find the area and perimeter of the figure, correct to 2 decimal places. (Take π = 3.14)



$$\text{Radius} = \frac{1}{2} \times 7\ cm$$
$$= 3.5\ cm$$
$$\text{Area} = 7 \times 7 + \frac{1}{2} \times 3.14 \times 3.5 \times 3.5$$
$$= 68.2325\ cm^2$$
$$= 68.23\ cm^2 \text{ (2 d. p.)}$$
$$\text{Perimeter} = \frac{1}{2} \times 3.14 \times 7 + 7 \times 3$$
$$= 31.99\ cm$$

Ans: Area = $68.23\ cm^2$ [2]

Perimeter = $31.99\ cm$ [1]

7. Three brothers, Alan, Bala and Chandra, share a sum of money. Alan has 40% of the sum of money. Bala got 4 times as much as Chandra. Bala has $60 more than Alan.

(a) What percentage of the sum of money did Chandra get?
(b) How much money did Alan get?

Alan : Bala : Chandra

= 2 : 3

= 10 : 15

= 10 : 12 : 3

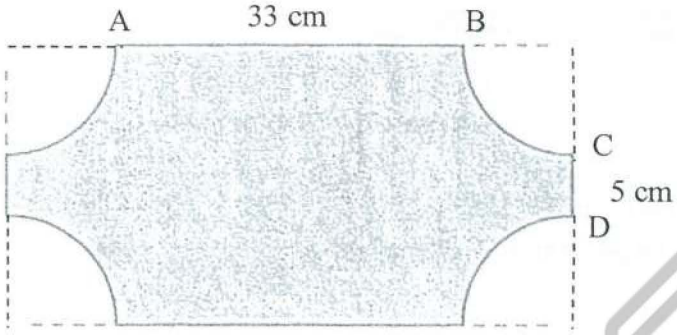
(a) Chandra $= \frac{3}{25} \times 100\%$
$= 12\%$

(b) 2 units = $60
10 units = $60 × 5
= $300

Ans: (a) 12% [2]

(b) $300 [2]

8. The figure below shows a rectangle with its corners cut off. The ratio of the length of the rectangle to its breadth is 12 : 5. Each of the 4 identical corners that has been cut off is a quarter circle. The length AB is 33 cm and the length of CD is 5 cm.



(a) What is the radius of each quarter circle?
(b) What is the perimeter of the shaded part? (Take π = 3.14)
(Give your answer correct to 1 decimal place.)

Length	Breadth
$33 + 2u$	$5 + 2u$
[12]	[5]

$60 + 24u = 165 + 10u$
$14u = 165 - 60$
$= 105$
$1u = 105 \div 14$
$= 7.5$

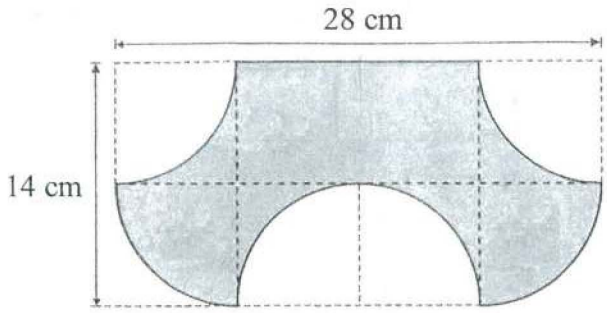
(a) Radius $= 7.5\ cm$

(b) Perimeter $= 2 \times 3.14 \times 7.5 + 33 \times 2 + 5 \times 2$
$= 123.1\ cm$

Ans: (a) $7.5\ cm$ [2]

(b) $123.1\ cm$ [2]

9. The shaded figure shown below is formed by a straight line and 6 identical quarter circles.



(a) Find the radius of each quarter circle.

(b) Find the area of the shaded figure. (Take $\pi = \frac{22}{7}$)

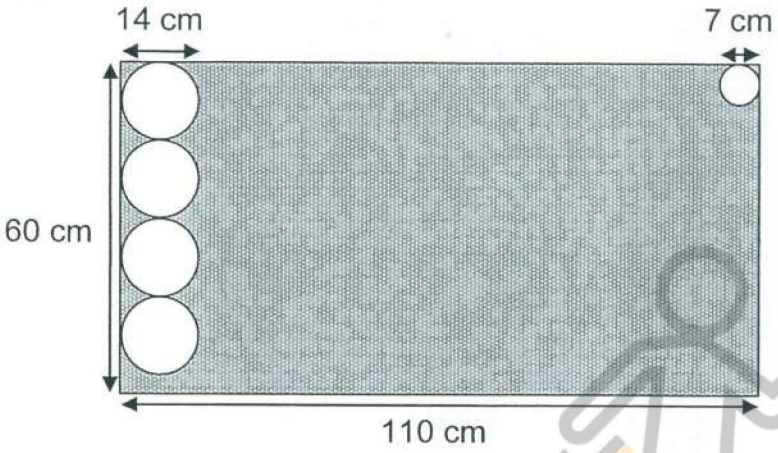
(a) Radius $= 14\ cm \div 2$
$= 7\ cm$

(b) Area $= 6 \times 7 \times 7 - \frac{1}{2} \times \frac{22}{7} \times 7 \times 7$
$= 217\ cm^2$

Ans: (a) $7\ cm$ [1]

(b) $217\ cm^2$ [3]

10. Ali had a piece of rectangular paper. He cut out four bigger circles with a diameter of 14 cm at first. Then, he cut as many smaller circles with a diameter of 7 cm as he could.



(a) What was the greatest number of smaller circles Ali could cut?

(b) Find the area of the paper left. Take $\pi = \frac{22}{7}$.

(a) $(110 - 14) \div 7 = 13\ R\ 5\ cm$

$60 \div 7 = 8\ R\ 4\ cm$

Number of smaller circles $= 13 \times 8$

$= 104$

(b) Area of rectangle $= 110 \times 60$

$= 6600\ cm^2$

Area of circles $= 4 \times \frac{22}{7} \times 7 \times 7 + 104 \times \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2}$

$= 616 + 4004$

$= 4620\ cm^2$

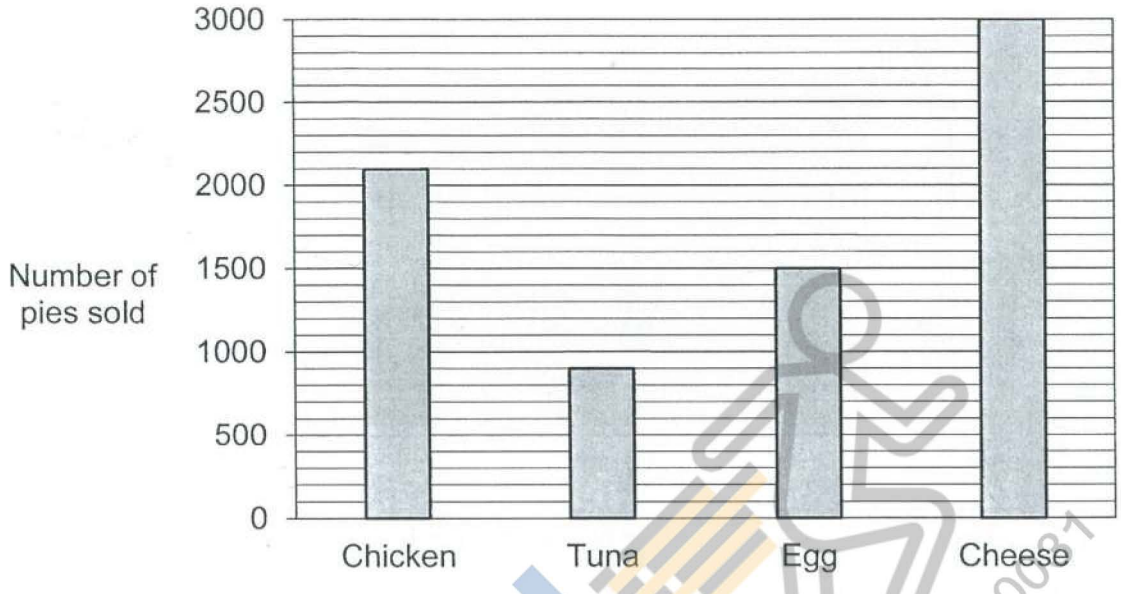
Area left $= 6600 - 4620$

$= 1980\ cm^2$

Ans: (a) 104 [2]

(b) $1980\ cm^2$ [3]

11. The bar graph below shows the number of each type of pie sold at a bakery in a week.



(a) What percentage of pies sold at the bakery were tuna pies?

(b) All the cheese pies were packed into boxes of 3 or 5. There were 718 boxes in all. How many boxes contained 5 cheese pies?

(a) Percentage $= \frac{9}{75} \times 100\%$

$= 12\%$

(b) $3 \times 718 = 2154$

$3000 - 2154 = 846$

$846 \div 2 = 423$

Ans: (a) 12% [2]

(b) 423 [3]

END OF CLASS TEST