CADET COLLEGE PETARO

CLASS O-I

Syllabus Outline for MATHEMATICS Paper

CHAPTER # 1

ALGEBRA

1 Simplifying and evaluating Algebraic Expressions

2 Solving Word Problems

Review 1

CHAPTER # 2

ANGLES IN GEOMETRIC FIGURES

1 Finding Unknown Angles

Review 2

CHAPTER # 3

FRACTIONS

1 Dividing a Fraction by a Whole Number

2 Dividing a Whole Number by a Fraction

3 Dividing a Fraction by a Fraction

4 Solving Word Problems

Review 3

CHAPTER # 4

RATIO

1 Ratio and Fraction

2 Finding Part and Whole

3 Solving Word Problems

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CHAPTER # 5

PERCENTAGE

1 Finding the Whole Given a Part and the Percentage

2 Percentage Increase and Decrease

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CHAPTER # 6

CIRCLES

1 Parts of a Circle

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3 Area and Perimeter of Composite Figures

Review 6

CHAPTER # 7

SPEED

1 Speed, Distance and Time

2 Average Speed

3 Solving Word Problems

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CHAPTER # 8

VOLUME OF CUBES AND CUBOIDS

1 Volume of Cubes and Cuboids

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CHAPTER # 9

PIE CHARTS

1 Reading Pie Charts

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CHAPTER # 10

SOLID FIGURES

1 Solid Figures

2 Nets of Solid Figures

Review 10

CADET COLLEGE PETARO

CLASS O-I
MODEL TEST PAPER
MATHEMATICS

Time: 1 Hour	**Max. Marks: 100**

SECTION A

NOTE: Attempt all 15 MCQ's. Fill the correct option in the space given at the end of each question.

1.   Which of these is an Integer?

A. $\frac{7}{10}$

B. 6.5

C. -12

D. $-2\frac{3}{8}$

Answer: (   )

2.   Which number has the Prime Factors, $2 \times 3^2 \times 5$?

A. 13

B. 30

C. 60

D. 90

Answer: (   )

3.   What is the value of $3 + 4 \times 5 - 1$?

A. 11

B. 22

C. 34

D. 59

Answer: (   )

4. Which statement is true?

A. $-14 > -28$

B. $-25 > 1$

C. $-12 > -10$

D. $-15 > 0$

Answer: (   )

5. What is another way to write 1,064?

A. $(1 \times 10^2) + (6 \times 10^1) + (4 \times 10^0)$

B. $(1 \times 10^3) + (6 \times 10^1) + (4 \times 10^0)$

C. $(1 \times 10^3) + (6 \times 10^2) + (4 \times 10^1)$

D. $(1 \times 10^4) + (6 \times 10^2) + (4 \times 10^1)$

Answer: (   )

6. Which number represent all this graph?

sentence can be used to the values of n shown on

A. $n > 7$

B. $n \geq 7$

C. $n < 7$

D. $n \leq 7$

Answer: (   )

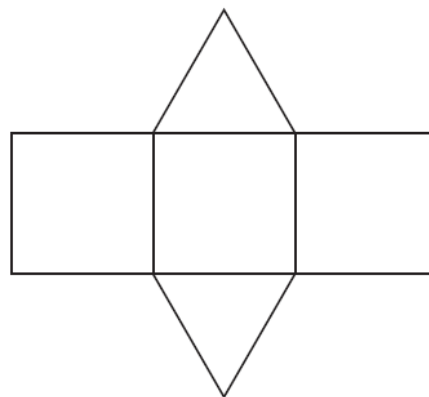7. *Use the picture to answer the question.*

Which solid figure does the net represent?

A. Cone

B. Cylinder

C. Triangular Prism

D. Rectangular Prism

Answer: (   )

8.   What value of x correctly completes the equation, $12 + x = 16\frac{1}{4}$?

A. $3\frac{3}{4}$

B. $4\frac{1}{4}$

C. $27\frac{3}{4}$

D. $28\frac{1}{4}$

Answer: (   )

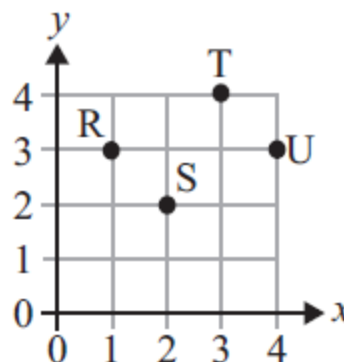9.   *Use the grid to answer the question.*

Which point is described by the ordered pair (3, 4)?

A. point R

B. point S

C. point T

D. point U

Answer: (   )

10.   A family of 2 adults and 3 children went to a movie. The tickets cost Rs.80 for adults and Rs.50 for children. Which expression represent the total cost of the tickets?

A. 2 + 3 + 80 + 50

B. (50 x 80) + (3 x 2)

C. (2 x 80) + (3 x 50)

D. (3 x 80) + (2 x 50)

Answer: (   )

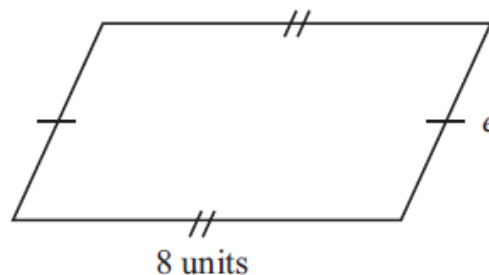11.   *Use the parallelogram to answer the question.*

The perimeter of the parallelogram is 28 units.
What is the length of side e?

A. 6 units

B. 8 units

C. 12 units

D. 20 units

8 units

Answer: (   )

12. Altogether, Saram and Noman have Rs.27.00. Saram buys a shirt for Rs.12.35 and Noman buys a pair of sandals for Rs.10.11. How much money remains?
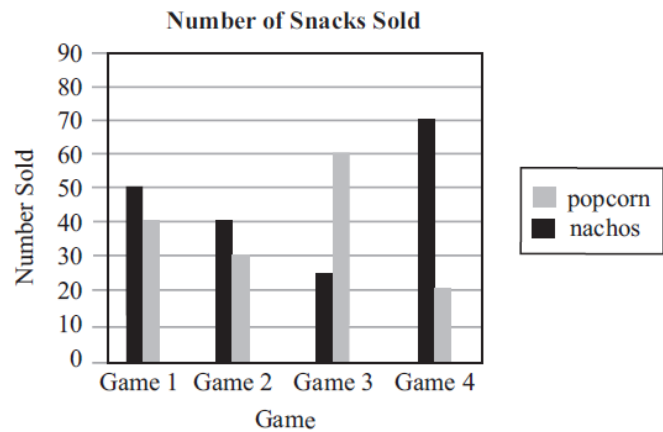
A. Rs.4.46   B. Rs.4.54   C. Rs.5.36   D. Rs.5.76

Answer: (   )

13. *Use the bar graph to answer the question.*

The graph shows the number of snacks sold at the 4 games. At which game were the fewest snacks sold?

A. Game 1

B. Game 2

C. Game 3

D. Game 4

Number of Snacks Sold

popcorn
nachos

Answer: (   )

14. Which symbol can be placed in the box to make the following an expression?

$$12 - 3x \;\square\; 5$$

A. ≤

B. >

C. =

D. +

Answer: (   )

15. Which phrase is represented by 3 (8 – n) + 2?

A. The sum of two and three times the quotient of eight and a number, n

B. The sum of two and three times the difference between a number, n, and eight

C. Two more than the difference between three times a number, n, and eight

D. Two more than three times the difference between eight and a number, n

Answer: (   )

SECTION B

NOTE: Attempt all the questions. Show the working clearly and write answer in the given space after each question.

Q-1

i) Find the Lowest Common Multiple of the following: [4]

3, 8, 16

Answer: _____

ii) Simplify the following expression: [4]

$6 (7c - 2) - 4 (c - c^2 - 8)$

Answer: _____

iii) Solve the following equation [4]

$$\frac{2x - 2}{3} = 4$$

Answer: _____

iv) Find the new temperature for each of the following. [4]
You may need to draw a Number Line.

       (a) The temperature was –13.58°C and rises by 19.1°C.

       (b) The temperature was –1.66°C and falls by 7.7°C.

Answer: (a) _____ , (b) _____

v) Find the Highest Common Factor of the following numbers. [4]
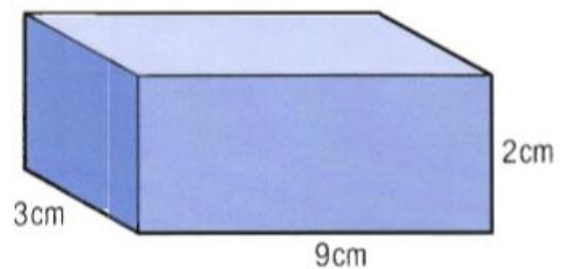
    21, 42, 56.

Answer: _____

Q-2

i) Calculate the Volume of the Cuboid shown. [2]

Answer: _____

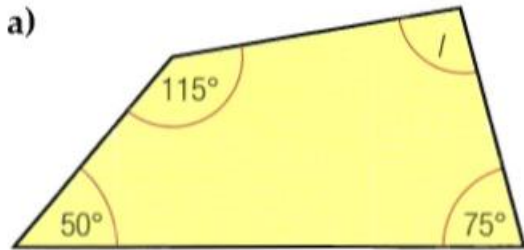ii) Find the Mean, Median, Mode and Range of this set of data. [5]
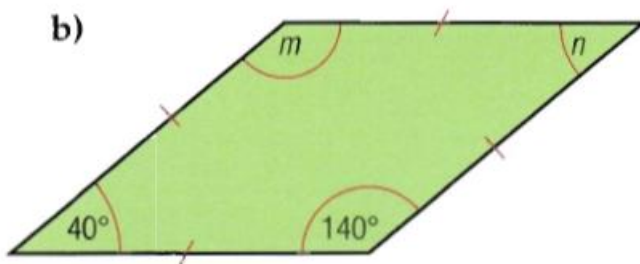
1, 1, 1, 1, 2, 2, 3, 4, 4, 4, 4, 4, 5, 5, 6.

Answer: Mean= _____, Median=_____, Mode=_____, Range=_____

iii) Work out the size of each of the unknown angles in these diagrams. [3]
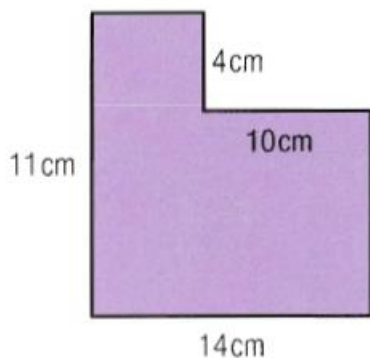
a)

Answer: (a) = _____

b)

Answer: (b) m = _____,   n = _____

Q-3

i) Jamil spends 1/3 of his pocket money on sweets. He saves 1/9 of his pocket money.   [2]
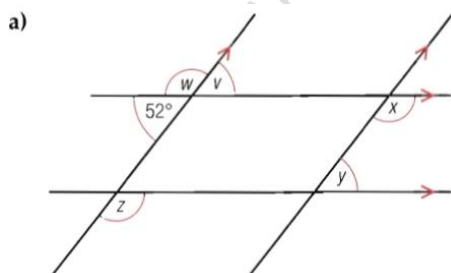   What fraction of his pocket money is left?

Answer: _____

ii) Calculate the Area and Perimeter of this shape.   [6]

4cm

10cm

11cm

14cm

Answer: Area = _____ cm², Perimeter = _____ cm

iii) Work out the size of each of the unknown angles in the diagrams.   [5]
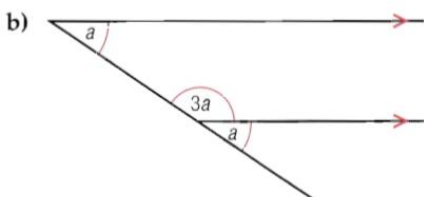
a)

w / v
52°
x
z
y

Answer: (a) v = _____

w = _____

x = _____

y = _____

z = _____

[3]

b)

a

3a

a

Answer: (b) a = _____

Q-4

i) Evaluate the following: [4]

(a) $\dfrac{5}{18} - \dfrac{8}{9} + \dfrac{5}{6}$

(b) $\dfrac{2}{13} + \dfrac{5}{13} + \dfrac{3}{13}$

Answer: (a) _____ , (b) _____

ii) Complete this table. [6]

Fraction	Decimal	Percentage
1/2		%
	0.25	%
		75 %

Answer:

iii) Complete the following statements, writing one the signs =, > or < [4]
to make each statement true.

(a) 8×8 _____ $4 \times 4 \times 4$

(b) 100 cm _____ 1000 mm

(c) 73 cm _____ 0.7 m

(d) 4.75 tonnes _____ 47500 kg :Answer

Q-5

i) Convert each of these measures to the units shown in brackets.   [2]

    (a) 7.142 kg   (g)   (b) 12568 m   (km)

Answer: (a) _____ g , (b) _____ km

ii) Without using the calculator, evaluate the following square root.   [2]

$$\sqrt{625}$$

Answer: _____

iii) In a survey of 500 cars, 245 were White, 25 were Blue and 13 were Red.   [2]
    The rest were Silver. Express number of Silver cars as a Percentage of the Total.

Answer: _____ %

iv) A bus journey from a Town to a City takes 2 hour 38 minutes. [2]
Complete the timetable beside.

Depart	Arrive
05 00	07 38
07 20	(a)
08 40	11 18
(b)	13 36

Answer: (a) _____ , (b) _____

v) For each sequence below write down the next two terms. [2]

(a)   31   24   17   10   ……

(b)   24   12   6   3   ……

Answer: (a) _____ , (b) _____

THE END