SHIVALIK PUBLIC SCHOOL (MOHALI)
Practice Worksheet
Class VI - Mathematics

Ch- Perimeter & Area

Q1. Mental Ability

(a) To put lace around a saree, we need its:
    (i)perimeter   (ii)area   (iii) both   (iv)none

(b) To calculate distance covered around a rectangle park in taking 5 rounds, we need to multiply its sum of length & breadth by:
    (i) 5   (ii)10   (iii) 15   (iv) 20

(c) To put tiles on the floor, what we need: perimeter or area of floor? _____.

(d) To calculate length of a rectangle, we subtract its breadth from its:
    (i) perimeter   (ii) double the perimeter
    (iii) half the perimeter   (iv) none

(e) Nonagon has _____ sides.

(f) Which has least area, a square of side 4 cm or a rectangle of side 4 cm by 3 cm? _____.

(g) Which has greater perimeter, a square of side 5 cm or a rectangle of side 5 cm and 3 cm? _____ .

(h) Write true or false: Area is measured in metres. _____

(i) Write true or false: If piece of string of length 32.4 cm is reformed as a square, side of the square is 8.1 cm. _____

(j) Each side of a regular pentagon is 8 cm. Its perimeter is _____.

(k) A circle is inscribed in a square. If the radius of the circle is 5 cm, then perimeter of the square is _____ cm.

(l) The measure of the region enclosed by a plane figure is called its_____ .

(m)   If side of a square is x cm, its area is given by
    (i) 2x sp.cm   (ii) x^2 sq.cm   (iii) 4x sq.cm   (iv) x sq.cm

(n) Perimeter of a square is equal to that of an equilateral triangle. If the perimeter of the triangle is 21.6 cm, side of the square is
    (i) 7 cm   (ii) 5 cm   (iii) 5.4 cm   (iv) 6 cm

Q2: Solve the following

1) What is the perimeter of a square whose area is 225 cm²?

2) A rectangular mirror is 30 cm long & 20 cm wide. A wooden frame is to be fixed around it. Find the total length of the frame.

3) Find the cost of fencing a square field with 35.5 m long side at the rate of Rs 9 per metre.

4) The length & breadth of a rectangle are in the ratio of 2:1. If its breadth is 200 m, then find its perimeter.

5) What is the perimeter of an isosceles triangle whose base is 5 cm & two equal sides are 6 cm?

Ch- Understanding Elementary Shapes

Q1. Mental Ability

(a) The number of right angles in a complete angle is
   (i) 1   (ii) 2   (iii) 3   (iv) 4

(b) The angle, which is more than 90° but less than 180°, is
   (i) a reflex angle   (ii) an obtuse angle
    (iii) a right angle   (iv) a straight angle

(c) A quadrilateral whose opposite sides are parallel is called a _____

(d) If an angle is $\frac{1}{4}$ of its supplement, then the degree measure of the angle is
   (i) 36°   (ii) 45°   (iii) 144°   (iv) 135°

(e) If one angle of a linear pair angles is 110°, the other one is
   (i) 20°   (ii) 250°   (iii) 110°   (iv) 70°

(f) _____ is a seven-sided polygon.

(g) A traffic policeman is standing looking towards south. In which direction will he look, if he turns to the left through
   (i) one right angle   (ii) two right angles
   (iii) three right angles   (iv) four right angles

(h) The sum of angles of a triangle is_____.

(i) Name the quadrilateral whose all sides & diagonals are equal. _____.

(j) Can a triangle have two obtuse angles? _____.

(k) Is one fourth of complete angle a right angle?_____.

(l) The measure of an acute angle is _____.
(m)   The measure of a right angle is _____.

(n) In a quadrilateral, if all the sides are equal, but diagonals are not equal it is called_____

(o) Write true or false:
   (A) Diagonals of a rhombus are equal .

   (B) A five-sided polygon is called as pentagon

   (C) A polygon, whose all sides are different in length & all angles are equal in measure, is called a regular polygon.

   (D) All 4-sided plane figures are quadrilaterals.

   (E) All squares are rectangles.

   (F) All rectangles are parallelograms.

(G) All rhombuses are parallelograms.

(H) All squares are rhombuses.

Q2: Solve the following

1) Classify the angles whose measures are given here:
   (a) 270° (b) 360° (c) 190° (d) 75°

2) Where will the minute hand of a clock stop, if it
   (a) starts at 8 O'clock & makes $\frac{1}{2}$ of revolution, clockwise?
   (b) starts st 9 O'clock & makes $\frac{1}{4}$ of revolution, clockwise?

Ch- Data Handling

Q1. Mental Ability

(a) A collection of numbers gathered to get some information is called:
   (i)Range   (ii)Data   (iii) Frequency   (iv)none

(b) Number of times a particular value in data occurs is called its:
   (i)Range   (ii)Data   (iii) Frequency   (iv)none

(c) To find the average of 2,5,6,7,8,9,4, we divide their sum by what numbers?_____.

(d) The range of 4,5,7,9,10,3,2,1 is _____.

(e) Frequency of 4 in the data 4,3,2,3,4,5,6,2,1 is _____.

(f) Pictorial representation of data is called _____.

(g) The difference of maximum & minimum value in data is called:
   (i)Range   (ii)Data   (iii) Frequency   (iv)none

(h) In pictograph we can use
   (i)Symbol   (ii)picture   (iii)both (i) & (ii)   (iv)none

(i) In a pictograph, each symbol represent:
   (i)a definite value   (ii) any value
          (iii) both (i) & (ii)   (iv)none

Q2: Solve the following

1) The expenditure of a company under different heads for a financial year (in lakhs) in given in the table below:

Head	Expense (in lakhs)
Salary	70
Conveyance	20
HRA	25
Interest on GPF	20
Miscellaneous	15

Draw the pictograph of the given data.

2) The population of various cities at a certain period of time is given in the table:

City	Population (in crores)
Delhi	140
Mumbai	185
Kolkata	155
Chennai	118
Bangalore	136
Hyderabad	108

(a) Name the least populated city.
(b) What is the total population of all cities?

(c) What is the difference between most populated and least populated city?
(d) Is population of Bangalore double of Delhi?

3) The time spent on internet (in minutes) by 30 students after school in a week is given below. Represent the information in tabular form using tally marks.
10 20 25 15 10 30 60 15 15 25 25 30 25 30 10 15 60 25 15 25 30 30 20 10 60 25 20 30 30
(i) How many students spent more than 30 minutes on the internet?
(ii) How many students spent less than 15 minutes on the internet?
(iii) How many students spent less than 60 minutes on the internet?

Ch- Ratio & Proportion

Q1. Mental Ability

(a) The ratio equivalent to 18:12 is
   (i)2:3   (ii)3:2   (iii) 5:1   (iv)1:5

(b) Ratio 3:4 is same as
   (i) 4:3   (ii)6:8   (iii) 8:6   (iv) 1:4

(c) Unit of ratio is _____.

(d) The simplest form of 12:18 is_____.

(e) If Rs 80 is divided between A & B in the ratio 2:3, then A's share will be _____ of Rs 80.

(f) Write true or false: (i) The ratio of the height of Anil & Sunil is 4:3. If Anil is 1.8 m tall, then sunil's height is 1.6 m.
   (ii) A ratio of whose terms have no common factor other than 1 is said to be in the simplest form.

(g) If 9,x,7,49 are in proportion, then the value of x is
   (i) 49   (ii) 7   (iii) 63   (iv) 36

(h) Two numbers are in ration 5:7. If sum of the numbers is 180, the larger one is
   (i) 105   (ii) 108   (iii) 75   (iv) 110

(i) If p,q,r,s are in proportion , then we have
   (i) p:q::r:s (ii) p:s::q:r (iii) both (i) & (ii) (iv) q:r::p:s

(j) How many are there in a score? _____.

Q2: Solve the following

1) 3 dozen of bananas cost Rs 72. Find the cost of 120 bananas.

2) A car travels 275 km in 5 hrs. (a) How far will it cover in 35 hrs
(b) How much time will it take to cover 825 km?

3) Write each of the following ratio in the simplest form:
   (a) 15:45   (b) 90:270   (c) 16:12

4) The number of boys & girls in a school are 260 & 390 respectively. Find the ratio of girls to the total number of students.

5) If the first, second & third terms of a proportion are 6,18 & 12 respectively, find the fourth term.

Chapter – Algebra

Q1- MULTIPLE CHOICE QUESTIONS :

1- Which of the following is expression with one variable?
a) x + y + z
b) 1
c) Y+1
d) X+y-5

2- The length of a rectangular hall is 4 meters less than 3 times the breadth of the hall. What is the length, if the breadth is b meters?
a) 12b
b) 3b- 4
c) 3b +4
d) None of these

3- The _____ of the variable in an equation which satisfies the equation is called a solution to the equation.
a) Value
b) Factor
c) Term
d) None of these

4- The teacher distributes 4 pencils per student. Can you tell how many pencils are needed for given number of students? (Use s for the number of students.)
a) 4 – s
b) 4 + s
c) s
d) 4s

5- Radha is drawing a dot Rangoli (a beautiful pattern of lines joining dots with chalk powder.) She has 10 dots in a row. How many dots will her Rangoli have for r rows?
a) 10 + r
b) 10r
c) 10 -r
d) 10

6- The value of 2x – 12 is zero, when x = _____.
a) 0
b) 6
c) 12
d) 1

Q2- State whether the following statements are true or false:
a)   The parts of an algebraic exponent which are connected by + or – sign are called its terms.
b)   5 times x subtracted from 8 times y is 5x-8y.
c)   A number having fixed value is called variable.
d)   The numerical coefficient of $-2x^2y$ is -2.

Q3- ASSERTION AND REASONING QUESTIONS:

1. Assertion (A) – The rule, which gives the number of matchsticks required to make the matchstick pattern L, is 2n.

Reason (R) – For n = 1, the number of matchsticks required =2 × 1 = 2

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c)A is true but R is false

d) A is false but R is true

2.) Assertion (A) – The rule, which gives the number of matchsticks required to make the matchstick pattern C, is3n

Reason (R) – For n = 2, the number of matchsticks required =2 × 2 = 4

a) Both A and R are true and R is the correct explanation of A

b)Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

3.) Assertion (A) – The rule, which gives the number of matchsticks required to make the matchstick pattern F, is 2n

Reason (R) – For n = 3, the number of matchsticks required =2 × 3= 6 etc.

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

Q4- CASE STUDY:

At the present time , decreasing water level is the major problem so in order to conserve the water , a housing society people decided to do rainwater harvesting .Rainwater is the major source of water harvesting .For this purpose rainwater is collected in the underground tank at the rate of 30 cm cube /sec. Taking volume of water collected in x seconds as y cm cube.

   i) Write a linear equation according to given question.

       a) 30= yx

       b) y= 30x

       c) x= 30y

ii) Write it in standard form as ax+ by+c=0

  a) y+30 x+0= 0

  b) 30x-y+0= 0

  c) None of these

iii)Value of a+b+c is

   a) 29

b) 19

c) 9

iv) If x=2, then y= ?

a) 60

b) 90

c) 12

Chapter – Decimals

Q1: Multiple Choice Questions

1. Greatest number in the following is _____
a) 2.202.   b) 2.02.   c) 2.2   d) 2.002

2. Smallest number in the following is _____.
 a) 50.5.   b) 50.05   c)55.005   d) 55.5

3. 20 rupees 2 paise = _____
 a) Rs. 20.20   b) Rs. 20.02   c) Rs. 2.02.   d) Rs. 20.002

 4. 28 Kg 82g = _____
a) 28.082.   b) 28.820.   c) 28.00 82.   d) 2.882

5. 72mm = _____ cm.
a) 0.72.   b) 720   c)7.2   d)0.072

6. 8 Kg 8 g = _____ g.
a) 8.008   b) 8.800   c) 800 8   d) 8080

7. Place of 7 in the number 46.375 is _____
 a) Tens   b) Hundredths.   c) Hundreds.   d) Thousandths

8. Place value of 6 in the number 365.87 is _____
 a) 60   b) 6.   c) 6/10   d)6/100

9. The sum of 56, 8.752 and 373.95 is _____
a) 438.262.   b)383.262.   c) 438.702   d) 383.702.

10 Substract the sum of 48.7 and 9.635 from 200.
a) 258.335.   b) 41.665.   c) 141.335.   d) 257.665

Assertion & Reasoning
Choose the correct option from the following to answer the given questions:-
a) Both (A) and (R) are true and (R) is the correct explanation of (A)...
b) Both (A) and (R) are true but (R) is not the correct explanation of (A)
c) (A) is true but (R) is false.
d) (A) is false but (R) is true..
e) Both (Aland (R) are false.

1. Assertion (A) := 2 rupees 5 paise=Rs 2.50
Reason (R):- Rs.1 = 100 paise

2. Assertion (A) :- Place value of four (4) in the no. 736.48 is 4/10
Reason (R):- First place in decimal part is tenths.

 3. Assertion (A): -73.564, 8.295,343.008 are like decimals.
Reason (R.) := Decimals having same digits in the decimal part are like decimals.

4. Assertion (A): - 40 kg 4g = 40.04 kg.
Reason (R):= 1kg = loog
5. Assertion (A)=-3.3, 3.30 and 3.300 are equal.
Reason (R):- All decimal number can be written as fractions.

CASE STUDY
Rahul went to Elante Mall from Kharar. He travelled 15 km 58m by bus to reach Chandigarh. Then he took an auto and covered 9km 9m to reach the mall. He had Rs. 5000 with him. He purchased a pair of jeans for 2050 rupees 75 paise and a shirt 989 rupees 8 paise. After shopping he went to food court. He ordered a pizza, a burger and a cold coffee for 1150 rupees. He was very happy to spend the whole day in the mall.

1) How far is the Elante Mall from Kharar ?
2) How much more distance did he cover by bus than Auto?
3) What is the total amount spent by Rahul in the Mall?
4) How much cheaper is the shirt than a pair of jean?
5) How much money was left with Rahul ?