



PON VIDYASHRAM GROUP OF CBSE SCHOOLS
ANNUAL EXAMINATION (2017-18)
MATHEMATICS WORKSHEET

Name: _____

Date: _____

Roll No: _____

Std: VIII Sec: _____

COMPARING QUANTITIES

MCQS:

1. Bananas are brought at 15 for a rupee and sold at the rate of 9 for a rupee. The gain percent is

a. 30% b. 60% c. 66%.

2. What is the cost price of an article which is sold at a loss of 25% for Rs.150

a. Rs. 125 b. Rs.175 c. Rs.200 d. Rs.225

3. If the cost price of 21 copies of a book are same as the selling price of 18 copies of the book, then gain% is

a. $14\frac{2}{7}\%$ b. $16\frac{2}{3}\%$ c. $33\frac{1}{3}\%$ d. $23\frac{1}{3}\%$

FILL IN THE BLANKS :

1. Profit or loss is always calculated on _____

2. Discount is always calculated _____

3. The period after which the interest is added to the principal is called _____ period

4. 12% of x is 18; x is equal to _____

5. Depreciation per unit of time is called _____

ANSWER THE FOLLOWING:

1. 200 Kg of sugar was purchased at the rate of RS 15 per kg and sold at a profit of 5%. Compute the profit and selling price per kg.

2. Simple interest on a sum of money for 2 years at $6\frac{1}{3}\%$ per annum is Rs 5,200. What will be the compound interest on that sum at the same rate for the same time period?

3. Find the compound interest on Rs. 1,60,000 for 2 years at 10% per annum when compounded semi-annually.

4. A man buys a plot of agricultural land for Rs.3,00,000. He sells one-third at a loss of 20% and two-fifths at a gain of 25%. At which price must he sell the remaining land so as to make an overall profit of 10%.
5. A man bought 2 T.V sets for Rs.42,500. He sold one at a loss of 10% and other at a profit of 10%. If the selling price of each T.V set is same, determine the C.P of each set.
6. Convert the following ratios into percentage.
 - a. 5 : 4
 - b. 3 : 5
7. The marked price of a ceiling fan is \$ 1250 and the shopkeeper allows a discount of 6% on it . Find selling price of a fan.
8. Mohan bought a CD for \$ 750 and sold it for \$ 875. Find his gain percent.
9. Ravi purchased a table for \$ 1260 and due to some scratches on its top, He had to sell it for \$ 1167. Find his loss%.
10. Find the compound interest on \$ 25000 for 3 years at 6% per annum compound annually.
11. Find the amount and the compound interest on \$2500 for 2 years at 10% per annum compounded annually.
12. The population of a town 2 years ago was 62,500. Since some persons migrate to different cities the number of people decreases every year at the rate of 4% per annum. Find its present population.

PRACTICAL GEOMETRY

SHORT ANSWER TYPE QUESTIONS:

1. Construct a rhombus with the side 4.5 cm and one of its angles is 60° .
2. Construct a rectangle ABCD in which side BC=5cm and diagonal BD= 6.2 cm.
3. Construct a parallelogram ABCD, with AB=5cm, BC=4.5 cm and AC= 7 cm.
4. Construct a rectangle PQRS, in which PQ=5.5 cm and diagonal PR=6.4 cm.
5. Construct a square ABCD, in which each diagonal is of 6 cm length.

LONG ANSWER TYPE QUESTIONS:

1. Construct a quadrilateral PQRS in which PQ=3.6 cm, QR=5cm, RS=4.5 cm, $\angle Q=120^\circ$ and $\angle R=70^\circ$.
2. Construct a quadrilateral ABCD given that AB=4cm, BC=3cm, AD=3.5 cm, diagonal AC= 5 cm and diagonal BD=6cm.
3. Construct a quadrilateral ABCD given that AB=5 cm, BC=4.5 cm , CD=4 cm , $\angle B=60^\circ$ and $\angle C=135^\circ$.

4. Construct a parallelogram ABCD in which $BC = 6\text{ cm}$, $AB = 3.5\text{ cm}$ and $\angle ABC = 70^\circ$.
5. Construct a kite ABCD in which $AB = 4\text{ cm}$, $BC = 4.9\text{ cm}$ and $AC = 7.2\text{ cm}$.

MENSURATION

MULTIPLE CHOICE QUESTIONS

1. The surface area of a cube is $1,734\text{ cm}^2$. Its volume is
 - a. $2,197\text{ cm}^3$
 - b. $4,913\text{ cm}^3$
 - c. $2,744\text{ cm}^3$
 - d. $4,096\text{ cm}^3$
2. How many cubes of 10 cm edge can be put in a cubical box of 1 m edge?
 - a. 10
 - b. 100
 - c. 1,000
 - d. 7,200
3. Two cubes have their volumes in the ratio $1:27$ the ratio of their surface areas is
 - a. $1:3$
 - b. $1:9$
 - c. $1:27$
 - d. none of these
4. The length of a room is 5.5 m and width is 3.75 m . Find the cost of paving the floor by slabs at the rate of $\$800$ per sq. metre.
 - a. $\$15000$
 - b. $\$15550$
 - c. $\$15600$
 - d. $\$16500$
5. 66 cm^3 of silver is drawn into a wire of 1 mm in diameter. The length of the wire [in meters] will be
 - a. 78
 - b. 84
 - c. 96
 - d. 108

FILL IN THE BLANKS:

1. The area of equilateral triangle is _____.
2. The line joining the centres of the two circles is called _____ of the cylinder.
3. The curved surface area of a cylinder is _____.
4. The volume of a cube of a side 8 cm is _____.
5. The volume of a wooden cuboid of length 10 cm and breadth 8 cm is $4,000\text{ cm}^3$. The height of the cuboid is _____.

SHORT ANSWER TYPE QUESTIONS:

1. How many paving stones measuring 2.5m x 2m are required to cover the rectangular courtyard 30m long and 16.5 m wide?
2. What will be the ratio of the circumference to the diameter of the circle if its original radius is tripled?
3. Find the volume in cu.dm of the cube whose side is 1.2 m.
4. A cuboidal wooden box has length =1.5m breadth=25cm and height = 15cm. Find its volume.

LONG ANSWER TYPE QUESTIONS:

1. Eight identical cuboidal wooden blocks are stacked one on top of the other. The total volume of the solid so formed is 128 cm³. If the height of each block is 1cm and the base is a square, find the dimensions of each block.
2. What is the weight of a cubical block of ice 50cm in length, if one cubic meter of ice weighs 900 kilograms?
3. The rain water that falls on a roof of area 6,160m² is collected in a cylindrical tank of diameter 14m and height 10m and thus the tank is completely filled. Find the height of rain water on the roof.
4. The parallel sides of a trapezium are 20 cm and 10 cm. Its non-parallel sides are both equal, each being 13cm. Find the area of the trapezium.
5. If the length of a rectangle increases by 10% and the breadth of the rectangle decreases by 12% ,then find the % change in area.
6. An open rectangular cistern when measured from outside is 1.35m long, 1.08m broad and 90cm deep and is made of iron which is 2.5 cm thick. Find the capacity of the cistern and the volume of the iron used.
7. A solid iron rectangular block of dimensions 4.4m, 2.6m and 1m is cast into a hollow cylindrical pipe of internal radius 30cm and thickness 5cm. Find the length of the pipe.
8. The length of a room is half more than its breadth .The cost of carpeting the room at Rs 3.25 per m² is Rs 175.50 and the cost of papering the walls at Rs 1.40 per m² is Rs 240.80. If 1 door and 2 windows occupy 8m², find the dimensions of the room.

PLAYING WITH NUMBERS

MULTIPLE CHOICE QUESTIONS:

1. $31x$ is divided by 2 if $x =$
 - a) 5
 - b) 0
 - c) 7
 - d) 9
2. 2415 is divisible by
 - a) 5
 - b) 10
 - c) 2
 - d) 4
3. Three digit number abc can be expressed as

$$a) 100a + 10b + c$$

$$b) 100b + 10a + c$$

$$c) 100c + 10b + c$$

d) none of these

4. If $A \times A = 3A$, then find A

$$a) 7 \qquad b) 4$$

$$c) 6 \qquad d) 2$$

5. If $N \div 5$ leaves a remainder 3, what might be the ones digit of N?

$$a) 3 \text{ or } 0 \qquad b) 3 \text{ or } 8$$

$$c) 3 \text{ or } 9 \qquad d) \text{ none of these}$$

FILL IN THE BLANKS:

1. If the ones digit of a number is _____, then the number is divisible by 2.
2. If the ones digit of a number is 0 or 5, then it is divisible by _____.
3. If a number is divisible by 6, then it is divisible by both _____ and _____.
4. The example of a number which is divisible by 2 but not by 4 is _____.
5. If $37 + AB = 9A$, then $A = \underline{\hspace{1cm}}$ and $B = \underline{\hspace{1cm}}$.

LONG ANSWER TYPE QUESTIONS:

1. If $13Z4$ is a multiple of 6, where Z is a digit, what might be the value of Z?
2. If $21Y8$ is a multiple of 6, where Y is a digit, what might be the value of Y?
3. Solve the following cryptarithm, and find the value of A and B.

$$\begin{array}{r} A B 7 \\ + 7 A B \\ \hline 9 8 A \end{array}$$

4. The value of A in the following addition problem is

$$\begin{array}{r} 8 7 A \\ + 7 A 4 \\ \hline 1 6 4 0 \end{array}$$

5. In the given multiplication, the value of A is

$$\begin{array}{r} A B \\ \times 5 \\ \hline C A B \end{array}$$