

ST. THOMAS SCHOOL

WORKSHEET- 8

CLASS – VIII SUBJECT – MATHS

LINEAR EQUATIONS

1. Find three consecutive even no's whose sum is 246.
2. The sum of the digits of a 2-digit number is 7. The number obtained by interchanging the digits exceeds the original by 27. Find the number.
3. The perimeter of a rectangle is 240cm. If its length is decreased by 10% and its breadth is increased by 20%, we get the same perimeter. Find the length and breadth of the rectangle.
4. Prema receives a certain amount of money on her retirement from her employer. She gives half of this money and an additional sum of Rs 10,000 to her daughter. She also gives one third of the money received and an additional sum of Rs 3000 to her son. If the daughter gets twice as much as the son, find the amount of money Prema received on her retirement.
5. The ages of Ram and Sonam are in the ratio 5:7. Four years later, their ages will be in the ratio 3:4. Find their ages.

COMPARING QUANTITIES

1. Find the rate per cent per annum if compound yearly-
Principal = Rs 3136 Compound Interest = Rs 345 Time = 2 yrs
2. Ramu purchased a boat for Rs 16,000. If the cost of the boat is depreciating at the rate of 5% per annum, calculate its value after 2 years.
3. Sonal brought a refrigerator for Rs 14,300 including a VAT of 10%. Find the price of the refrigerator before VAT was added.
4. A car is marked at Rs 3,00,000. The dealer allows successive discounts of 6%, 4% and 2.5% on it. What is the net selling price?
5. A T.V was purchased for Rs 3200 and Rs 650 were spent on its repairs. Then it was sold at a gain of 12.5%. How much did the seller receive?

PRACTICAL GEOMETRY

1. Construct a rhombus if its diagonals are 5.8cm and 6.4cm.
2. Construct a quadrilateral ABCD in which AB = 5.8cm and, BC = 4.2cm
3. Construct a quadrilateral ABCD in which CA = 5.8cm, BC = 4.2cm, AD = 4.7cm, CD = 5.2cm and BD = 6.7cm.

FACTORIZATION

1. If $x - \frac{1}{x} = 4$, find $x^2 + \frac{1}{x^2}$ and $x^4 + \frac{1}{x^4}$
2. Factorise using splitting the middle term :- (i) $z^2 - 9z + 14$ (ii) $12p^2 - p - 1$
3. Factorise $12y^3 - 14y^2 - 10y$

DATA HANDLING

1. The number of students in a hostel speaking different languages is given below. Present the data in a pie chart.

Language	Hindi	English	Marathi	Tamil	Bengali	Total
No. of Students	40	10	8	8	6	72

2. The way Mr. Sharma spends his allowance is given below. Draw the pie chart.

Item	Lunch	Hobby	Recreation	Saving
Percent	25 %	40 %	20%	15%

3. Represent the given data with the help of a histogram.

Marks	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50
No. of Students	5	9	14	7	5

4. Represent the given data with the help of a histogram.

Age (in years)	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50
No. of Teachers	12	11	8	1	3

MENSURATION

1. Find the volume of wood required for making a closed box with external measurements 14cm by 9.5cm by 6cm and wood is 1.5cm thick.
2. A godown measures 40m x 25m x 15m. Find the maximum number of wooden crates each measuring 1.5m x 1.25m x 0.5m that can be stored in the godown.
3. A well with 10m inside diameter is dug 14m deep. Earth taken out of it has been spread all round to a width of 5 metres to form an embankment. Find the height of the embankment.

4. A metal cube of edge 9cm is melted and formed into three smaller cubes. If the edges of two smaller cubes are 1cm and 6cm, find the edge of the third cube.

ALGEBRAIC EXPRESSIONS

1. Using suitable identity, find the value of:-
(i) 101×99 (ii) $(84)^2 - (76)^2$ (iii) $(10.4)^2$
2. Two adjacent sides of a rectangle are $3y^2 - 5z^2$ and $7y^2 - yz$. Find the perimeter.

EXPONENTS

1. By what number should $(\frac{5}{4})^{-3}$ be divided so that quotient may be $(\frac{15}{16})^{-2}$.
2. Write in standard form:- (i) 6×10^{-7} (ii) 5.32×10^{-6}
3. Simplify:- $(\frac{2}{3})^{-2} \times (-\frac{7}{8})^0$
4. What is the area of a rectangle with length 3^3 metres and width of 9^{-2} m?