



Octahedral classes, kharadi
2nd floor, yashwant plaza, near bank of India,

CLASS 08 - MATHEMATICS

Maths Practice sheet

Time Allowed: 3 hours

Maximum Marks: 60

Section A

1. Factorisation

- a) Factorize $x^4 - y^4$
- b) Factorize $15xy - 6x + 10y - 4$.
- c) Divide the given polynomial by the given monomial: $8(x^3y^2z^2 + x^2y^3z^2 + x^2y^2z^3) \div 4x^2y^2z^2$
- d) Divide as directed: $20(y + 4)(y^2 + 5y + 3) \div 5(y + 4)$
- e) Work out the division : $10y(6y + 21) \div 5(2y + 7)$
- f) Divide as directed: $26xy(x + 5)(y - 4) \div 13x(y - 4)$
- g) Obtain the factors of $z^2 - 4z - 12$.
- h) Factorise : $15pq + 15 + 9q + 25p$
- i) Factorise the expressions: $10ab + 4a + 5b + 2$
- j) Divide the given polynomial by the given monomial: $(x^3 + 2x^2 + 3x) \div 2x$

2. Simple and compound Interest

- a) The population of a city was 20,000 in the year 1997. It increased at the rate of 5% p.a. Find the population at the end of the year 2000.
- b) Monish sold two scooters for ₹ 40,000 and ₹35,000 respectively. He sells the first one at a gain of 25% and the second one at a loss of 10%. Find his overall gain or loss percent in the whole transaction.
- c) Calculate the amount and compound interest on Rs. 62500 for $1\frac{1}{2}$ years at 8% per annum compounded half yearly.
- d) Calculate the amount and compound interest on Rs. 10800 for 3 years at $12\frac{1}{2}\%$ per annum compounded annually.
- e) Find the amount and the compound interest on Rs. 10000 for $1\frac{1}{2}$ years at 10% per annum, compounded half yearly. Would this interest be more than the interest he would get if it was compounded annually ?
- f) The cost of 5 oranges is ₹ 75 and the cost of 6 apples is ₹ 78. Which fruit is costlier and why?
- g) The population of a place increased to 54000 in 2003 at a rate of 5% per annum. what would be its population in 2005.
- h) The marked price of a DVD is ₹4500. A shopkeeper allows two successive discounts of 10% and 5% by the force of a customer. Find the selling price of the customer after two discounts are given.
- i) A scooter was bought at Rs. 42000. Its value depreciated at the rate of 8% per annum. Find its value after one year.

- j) The price of a TV is Rs. 13000. The sales tax charged on it is at the rate of 12%. Find the amount that Vinod will have to pay if he buys it.

3. Direct and Inverse Variation

- a) A mixture of paint is prepared by mixing 1 part of red pigments with 8 parts of base. In the following table, find the parts of base that need to be added.

Parts of red pigment	1	4	7	12	20
Parts of base	8

- b) A school has 8 periods a day each of 45 minutes duration. How long would each period be, if the school has 9 periods a day, assuming the number of school hours to be the same?
- c) A school has 8 periods a day each of 45 minutes duration. How long would each period be, if the school has 9 periods a day, assuming the number of school hours to be the same ?
- d) Sheetal has enough money to buy 6 kg mangoes at the rate of ₹18 per kg. How much quantity of mangoes she can buy in the same money if the price increased to ₹25 per kg?
- e) The cost of 5 litres of a milk is ₹55. Tabulate the cost of 2,4 and 10 litres of milk.
- f) If 721 men construct a bridge in 48 days then in how many days 1442 men can do this work.
- g) There are 100 students in a hostel. Food provision for them is for 20 days. How long will these provisions last, if 25 more students join the group?

Number of students	100	125
Number of days	20	y

- h) Two persons could fit new windows in a house in 3 days. One of the persons fell ill before the work started. How long would the job take now ?
- i) A 5 m 60 cm high vertical pole casts a shadow 3 m 20 cm long. Find at the same time the height of a pole which casts a shadow 5m long.
- j) A factory requires 42 machines to produce a given number of articles in 63 days. How many machines would required to produce the same number of articles in 54 days ?