8th Maths Practice Paper-1

1. An altitude of a triangle is 5/3 of its corresponding base. If the altitude were increased by 4cm and the base decreased by 2cm, the area of the triangle would remain the same. Find the base and altitude of the triangle.

2. Some toffees are bought at the rate of 11 for Rs10 and same numbers are bought at the rate of 9 for Rs 10. If the whole lot is sold at one rupee per toffee, find the gain or loss percent.

3. Chandu purchased a watch at 20% discount on its marked price but sold it at marked price. Find the gain percent of Chandu on this transaction.

4. A motorboat covers a certain distance downstream in a river in five hours. It covers the same distance upstream in five hours and half. The speed of water is 1.5 km/hr. Find the speed of the boat in still water.

5. Factorize:

   (i) $2x^2+y^2+8z^3-2\sqrt{2}xy-4\sqrt{2}yz+8xz$

   (ii) $x^6 - 3x^4y^2 +3x^2y^4 -y^6$

6. Evaluate: $(36^{7/2} - 36^{9/2})/ 36^{5/2}$

7. Divide 34x-22x3-12x4-10x2-75 by (3x+7) and check your answer.

8. The digit in the tens place of a number is three times that in the ones place. If the digits are reversed, the new number will be 36 less than the original number. Find the number.

9. A well is dug 20m deep and it has a diameter 7m. The earth, which is so dug out, is spread out on a rectangular plot 22m long and 14m broad. What is the height of the platform so formed?

10. The total surface area of a hollow cylinder open at both ends is 4620sqcm, area of the base ring is 115.5sqcm and height 7cm. find the thickness of the cylinder.

11. A hemispherical bowl is made of steel 0.5cm thick. The inside radius of the bowl is 4cm. Find the volume of steel used in making the bowl.

12. A circus tent is cylindrical up to a height of 3m and conical above it .If the radius of the base is 49m and the slant height of the conical part is 53m, find the total canvas required to make the tent.

13. A storage tank consists of a circular cylinder with hemispherical ends on both the sides. If the external diameter of the cylinder be 1.4m and length be 5m. What will be the cost of painting it on the outside at the rate of Rs10persqcm?

14. The difference between the compound interest and simple interest on a certain sum of money for two years at 7.5% per annum is Rs 360. Find the sum.

15. At what rate % per annum will a sum of Rs 4000 yield compound interest of Rs 410 in two years?

16. Diagonal of a parallelogram bisect at the point O . XY is a line segment passing through O such that X lies on AD and Y lies on BC. Give reasons for each of the following

    (i) OB=OD

    (ii)$\angle$ OBY=$\angle$ODX

    (iii)$\angle$BOY=$\angle$DOX

    (iv)$\triangle$BOY$\cong$ $\triangle$DOX.

17. ABCD is a parallelogram, CE bisects $\angle$C and AF bisects $\angle$ A. prove that ABCF is a parallelogram.

18. What price should Aslam mark on a pair of shoes, which costs him Rs1200 so as to gain 12% after allowing a discount of 16%?

19. In how much time will a sum of Rs 1600 amount to RS 1852.20 at 5% per annum compound interest.

20. Meera's mother is four times as old as Meera. After five years, her mother will be three times as old as she will be then. What are their present ages?

21. The numerator of a rational number is less than its denominator by 3. If the numerator becomes three times and the denominator is increased by 20, the new number becomes 1/8 . Find the original number.

22. The length of a rectangle exceeds the breadth by 9cm. If the length and breadth are each increased by 3 cm the area is increased by 84sqcm. Find the length and breadth of the rectangle.

23. If the selling price of 18 oranges is equal to the cost price of 16 oranges, find the loss percent.

24. Toshiba bought 100 hens for Rs8000 and sold 20 of these at a gain of 5%. At what gain % must she sell the remaining hens so as to gain 20% on the whole?

25. The students of a class donated Rs 2401 for Prime Minister's relief fund. Each student paid as many rupees as the number of students in the class. Find the number of students in the class.