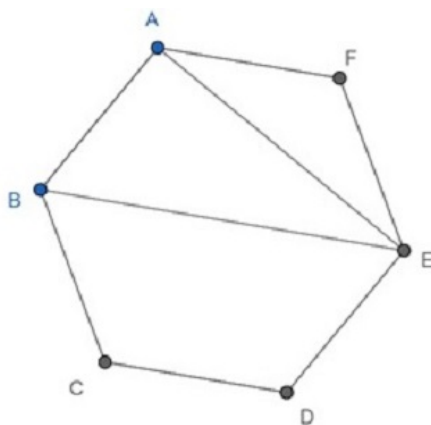
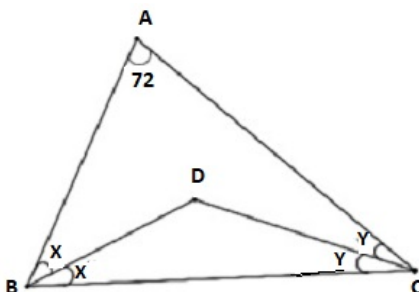


1. A four digit number formed by digits 5, 6, 7 and 9 exactly once, is perfect square of a natural number X. Find X.
2. If the simple interest on a principal amount at 5 p.c.p.a. for 3 years is Rs. 12000, find the sum of digits of the compound interest on the same principal amount for the same period at the same interest rate.
3. Amar, Bhuvan and Chetan have some marbles with them. Bhuvan has 20% more marbles than Amar and Chetan has 10% less marbles than Bhuvan. If the total number of marbles with all three of them is 164, then find the number of marbles with Chetan.
4. If $\frac{a}{b} = \frac{1}{5}$, then $\frac{6a+b}{6a-b} = ?$
5. $\triangle ABC$ is an isosceles triangle with side $AB = \text{side } AC$. Side BA is extended till point D such that $AB = AD$. Find $m\angle BCD$.
6. Two partners A and B share profit in the ratio $\frac{27}{5} : \frac{15}{4}$. By what % is A's share more than B.
7. Sum of current ages of father and son is 60 yrs. Five years ago, ratio of fathers age to sons age was 4 : 1. Find father's current age.
8. A regular hexagon has all 6 sides congruent and all 6 angles congruent. If ABCDEF is a regular hexagon having each side length 6 and if the length of diagonal $BE = 12$, find $\frac{AE^2}{2}$.



9. The selling price of 2 articles is Rs. 1485 each. After selling, one article incurred 10 % loss while other incurred 10% profit. What is the total loss or profit in Rupees?

10. 5 chairs and 3 tables cost Rs. 416. 7 chairs and 5 tables cost Rs. 636. Then the difference between the cost of 1 chair and cost of 1 table is?
11. Rhombus is a quadrilateral having all 4 sides equal. Area of a Rhombus is 16 . If the length of one diagonal is 4 and the length of other diagonal is L, find L^2 .
12. A has taken a loan of Rs. X from B. On the first day A returns Rs. 1 to B, on the second day A returns Rs. 2 to B, on the third day A returns Rs. 3 to B and so on. After 30 days A returned 93% of the loan amount to B. How much is the remaining loan amount?
13. A tank has 3 taps. One tap empties the tank in 2 hours. Second tap empties the tank in 5 hours. Third tap empties the tank in 10 hours. If all 3 taps opened simultaneously, after how many minutes the tank will be empty?
14. Milind has Rs. 600 in his pocket. Total number of Rs. 10 notes are double of Rs. 50 notes and number of Rs. 5 notes are 8 more than the number of Rs. 10 notes. Find total number of notes in his pocket.
15. In $\triangle ABC$, measure of angle A is 72° . Find $\frac{m\angle BDC}{2}$.



16. In the Wimbledon tennis tournament, total 128 tennis players participate. Each losing player goes out of the tournament and the winning player advances to the next round. If the total number of matches played in the entire tournament is T , then find $T - 47$.
17. P and Q are single digit natural numbers. If the product of the numbers 834P and Q7 is 55P383, Find $P + Q$.
18. $\frac{160\sqrt{294}}{7\sqrt{96}} = K$, where K is a natural number. Find K.
19. If P is the smallest integer that leaves remainder 1 when divided by all single digit prime numbers, then find $\sqrt{P + 150}$.
20. In the below diagram, $AB = 6$, $BC = 5$, $DE = 4$, $EF = 17$ and $FA = 8$. Find area of the hexagon ABCDEF. (Diagram not to the scale)

