

- Find the solution set of the following pair of linear equations.
 - $2x + y = 35$ (1)
 - $3x + 4y = 65$ (2)
- Find the discriminant of the quadratic equation $x^2 + 5x + 1 = 0$.
- Find the sum of first 11 terms of an Arithmetic Progression 2, 9, 16, 231
- Find the 60th term of an Arithmetic Progression 10, 20, 30, 40,
- The cash price of a bicycle is Rs. 1,000. In installment scheme, cash down payment is of Rs. 450 and two monthly installments of Rs. 300 each. Find the rate of interest charged in the installment scheme.
- The cost price of a wrist-watch is Rs. 800. It can be purchased by paying Rs. 425 as cash down payment and the remaining amount to be paid after two months, giving interest of Rs. 35. Find the value of the installment.
- Prove that $\tan 5^\circ \cdot \tan 25^\circ \cdot \tan 45^\circ \cdot \tan 65^\circ \cdot \tan 85^\circ = 1$
- Prove that square of the length of the hypotenuse of a right-angled triangle is the sum of the squares of the lengths of the other two sides.
- Prove that "Angles in a segment corresponding to minor arc are 5 congruent".
- Prove that "Angle made by a chord with tangent at one end point of the chord and the angle subtended by the chord in the alternate segment are congruent".
- Using the centre of a Circle, draw a tangent to the circle through a point in the exterior of circle. How many such tangents are drawn? Here, radius = 3 cm and the distance of the point, in the exterior of their circle, from the centre is 7 cm.
- Kailash's age at present is 2 years less than 6 times the age of his daughter Prema. The product of their ages 5 years later will be 330. What was the age of Kailash when his daughter Perna was born?

13. Write converse of Pythagoras Theorem and prove it.
14. The petrol rate is increased by Rs. 5/- per liter. Now in Rs.1320/-, 2 liters less petrol is obtained as compared to previous rate. Find the increased price of petrol per liter.
15. Two concentric circles having radii 73 and 55 are given. The chord of circle having greater larger radius touches the small circle. Then find the length of this chord.
16. Find the area of triangle ΔABC having vertices $A(4, 2)$, $B(3, 9)$ and $C(10, 10)$
17. On Hemisphere, frustum of a Cone shaped shuttle-cock is used for playing Badminton. The outer radius of frustum of cone is 5 cm and inner radius is 2 cm. The height of entire shuttle-cock is 7 cm. Then find the outer surface area of shuttle-cock.