

ACHIEVERS FOUNDATION

CLASS – 10TH

QUADRATIC EQUATION

1. Three consecutive natural number are such that the square of the middle number exceeds the difference of the squares of the other two by 60. Find the number
2. The sum of ages (in years) of a son and his father is 35 years and product of their ages is 150 years, find their ages.
3. One fourth of a herd of camels was seen in forest. Twice of square root of the herd had gone to mountain and remaining 15 camels were seen on the bank of a river, find the total number of camels.
4. In a class test, the sum of the marks obtained by a student in mathematics and science is 28. Had he got 3 marks more in mathematics and 4 marks less in science, the product of the marks would have been 180. Find his marks in two subjects.
5. Two pipes running together can fill a tank in $11\frac{1}{9}$ minutes. If one pipe takes 5 minutes more than the other to fill the tank, find the time in which each pipe would fill the tank separately.
6. The time taken by a person to cover 150 km was $2\frac{1}{2}$ hours more than the time taken in the return journey. If he returned at a speed of 10 km/hour more than the speed while going, find the speed per hour in each direction.
7. The denominator of a fraction is one more than twice its numerator. If the sum of the fraction and its reciprocal is $2\frac{16}{21}$, find the fraction.
8. The perimeter of a right triangle is 60 cm. Its hypotenuse is 25 cm. Find the area of the triangle.
9. Two water taps together can fill a tank in 9 hours 36 minutes. The tap of larger diameter takes 8 hours less than the smaller one to fill the tank. Find the time in which each tap can separately fill the tank.
10. The denominator of a fraction is two more than its numerator. If the sum of the fraction and its reciprocal is $\frac{34}{15}$, find the fraction.