



# Little Rose

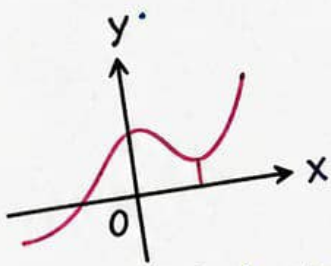
ACADEMY

Class

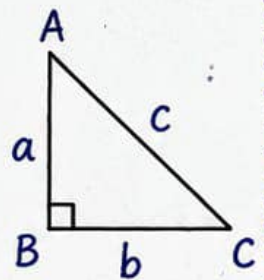
10<sup>th</sup>

Subject

# MATHS

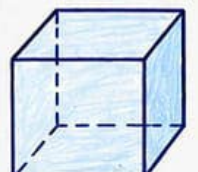
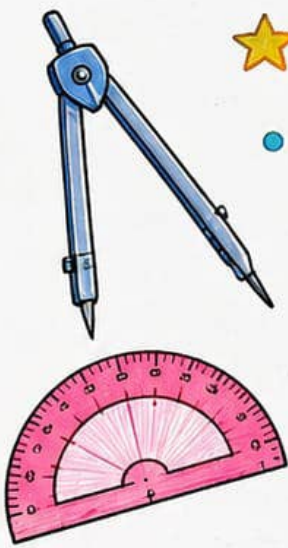


$$y = ax^2 + bx + c$$



$$a^2 + b^2 = c^2$$

$$\sqrt{x}$$



# 20 MOST IMPORTANT SUBJECTIVE QUESTIONS

## QUADRATIC EQUATION

CLASS 10<sup>th</sup>

1. Define a quadratic equation. Write its general form.
2. For what value of  $k$ , the equation  $kx(x-2)+6=0$  is a quadratic equation?
3. Find the nature of roots of the equation  $2x^2-3x+5=0$ .
4. Find the value of  $m$  for which the equation  $x^2-2mx+3=0$  has two equal roots.
5. Solve  $2x^2-7x+3=0$  by factorisation method.
6. Solve  $3x^2+2x-5=0$  by completing the square method.
7. Solve  $x^2-5x+6=0$  by using the quadratic formula.
8. Find the discriminant of the equation  $5x^2-6x+1=0$  and hence find the nature of its roots.
9. If the roots of the equation  $x^2-4x+k=0$  are real and equal, find the value of  $k$ .
10. Find the value of  $k$  for which the equation  $2x^2+kx+3=0$  has real and distinct roots.
11. If the roots of the equation  $x^2+2x+m=0$  are reciprocals of each other, find the value of  $m$ .
12. Form a quadratic equation whose sum of the roots is 5 and product of the roots is 6.
13. If  $\alpha$  and  $\beta$  are the roots of the equation  $2x^2-5x+3=0$ , find the value of  $\alpha^2+\beta^2$ .
14. If  $\alpha$  and  $\beta$  are the roots of the equation  $3x^2+7x-2=0$ , find the value of  $\frac{\alpha}{\beta}+\frac{\beta}{\alpha}$ .
15. Prove that the roots of the equation  $x^2-3x+2=0$  are real and distinct.
16. Find the quadratic equation whose roots are 2 and  $-\frac{3}{2}$ .
17. Find the quadratic equation whose roots are  $\frac{1}{3}$  and  $-\frac{1}{4}$ .
18. For what value of  $k$ , the roots of the equation  $kx^2+3x+2=0$  are real and equal?
19. If one root of the equation  $3x^2-5x+2=0$  is 2, find the other root.
20. A train travels a certain distance at a uniform speed. If the speed had been 5 km/h more, the journey would have taken 1 hour less. If the speed had been 5 km/h less, the journey would have taken 1 hour more. Find the speed of the train.