

X - Mathematics Assignment No.10 - Quadratic Equation

Fill the gap.

- Q1. The standard form of the quadratic equation in x is -----
- Q2. A quadratic equation containing both the second power and first power of the variable is called -----
- Q3. A quadratic equation in which first power term is missing is called -----
- Q4. Aryabhata who was born in 476 AD. gave a rule to sum up a geometric progression which involves solution of -----
- Q5. Hindu mathematician Shridhar discovered in 1025 a rule to solve a -----. The rule is called "Completing the Squares".
- Q6. The values of x obtained by solving a quadratic equation are called ----- of the quadratic equation.
- Q7. A quadratic equation can be solved by -----; ----- and -----

Cont Pg-2

ANSWERS:-

- (1) $a^2x^2 + bx + c = 0, a \neq 0$
- (2) Complete quadratic Eq.
- (3) Pure " "

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|------------------------|-------------------|-----------|
| (4) Quadratic Equation | (5) " " " | (6) Roots |
|------------------------|-------------------|-----------|

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| (7) Factorising ; Completing the square And by formula . |
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8. For the quadratic equation $an^2+bn+c=0$, $a \neq 0$
 b^2-4ac is called ----- of the quadratic equation.

Q9. The quadratic formula for the equation $an^2+bn+c=0$,
 $a \neq 0$, is ----- to find the value of n

Q10 If the roots of equation $an^2+bn+c=0$, $a \neq 0$
are real then -----.

Q11 If the roots of $pn^2+qn+r=0$, $p \neq 0$ are
not real then -----.

Q12. For equal roots of equation $an^2+bn+c=0$
 $a \neq 0$, the condition is that -----.

Q13. If the roots of $4n^2-5n+k=0$ are real
and equal then $k = \dots$.

Q14. A real number α is said to be a root
of the equation $an^2+bn+c=0$ if -----.

Q15. The --- of the quadratic polynomial an^2+bn+c
and the --- of the quadratic equation
 $an^2+bn+c=0$ are the ---.

ANSWER:-

(8) Discriminant

$$\frac{-b \pm \sqrt{b^2-4ac}}{2a}$$

(10) $b^2-4ac > 0$

(11) $q^2-4pr < 0$

(12) $b^2-4ac=0$

(13) $K = \frac{25}{16}$

(14) $a\alpha^2+b\alpha+c=0$

(15) Zeros, Roots same.