UPCOMING ONLINE BATCHES

MARCH 2023

01 MARCH 2023

10:30 AM to 12:30 PM

SSC ONLINE LIVE CLASS

BILINGUAL

15 MARCH 2023

08:00 AM to 10:00 AM

BANK ONLINE LIVE CLASS

BILINGUAL

22 MARCH 2023

02:00 PM to 04:00 PM

BANK ONLINE LIVE CLASS

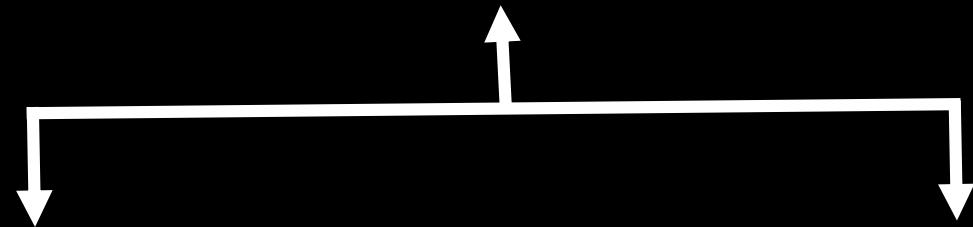**English & Bengali**

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Quadratic Equation

Type of Equations

Quadratic Equation
$(ax^2 + bx + c = 0)$

Unitary Equation
$(ax + by + c = 0)$

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

1. $X > Y$

2. $X < Y$

3. $X \geq Y$

4. $X \leq Y$

5. $X = Y$

or CND

EQUATION SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

$50x^2 - 60x + 16 = 0$

$a \quad c$
$50 . \times 16$
l
$10, 5 \quad 4 \times 4$

$(+ 40 \quad + 20) \times 2$
$\boxed{80}, 40$

50
20

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

$20y^2 - 32y + 12 = 0$

$20 \quad 12$

$(+ 20 \quad + 12) s$
$\boxed{100}, \boxed{60}$

$5, 4 \quad 4, 3$

20

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y

or CND

$12x^2 - 2x - 4 = 0$

$\dfrac{-6}{12}$

$10y^2 - 9y + 2 = 0$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y

or CND

$ax^2 + bx + c = 0$

$x^2 + x - 2 = 0$

$-2 +1$
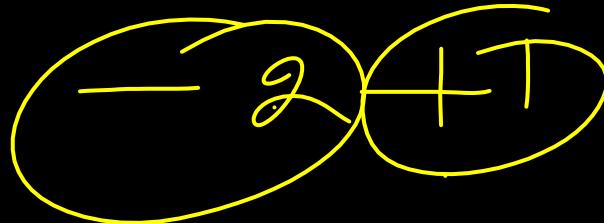
$ac = -2$
$b = 1$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

$y^2 - 9y + 20 = 0$

$x < y$

$+5 \quad +4$

20
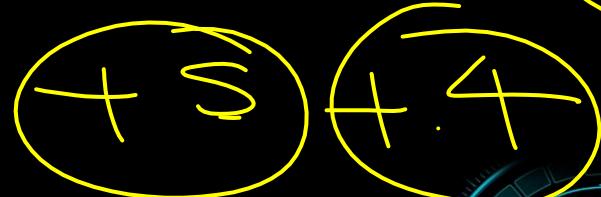
1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y

or CND

$x^3 - 371 = 629$

$x^3 = 1000$

$\boxed{x = 10}$

$y^3 - 543 = 788$

$y^3 = 1331$

$\boxed{y = 11}$

$x < y$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y

or CND

20

$\sqrt{961}$ x+ 1234 = 1482

$31x = 1482 - 1234$

$31x = 2488$

$\boxed{x = 8}$

$\sqrt{1024}$ y + 1196 = 1420

$32y = 1420 - 1196$

$32y = \dfrac{224}{7}$

$\boxed{y = 7}$

$\boxed{x > y}$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

1. X > Y

2. X < Y

3. X ≥ Y

4. X ≤ Y

5. X = Y

or CND

$2X^2 - 17X + 36 = 0$

$$+ \cdot \frac{9 \cancel{X}}{\cancel{2}}^{4.5} + \frac{\cancel{8}}{\cancel{2}}^{4}$$

$15Y^2 - 16Y + 4 = 0$

$$+ \frac{10}{15} \cdot + \frac{6}{15}$$

$X > Y$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

1. $X > Y$
2. $X < Y$
3. $X \geq Y$
4. $X \leq Y$
5. $X = Y$

or CND

$$7X^2 - 41X + 30 = 0$$

30

7

7×1 6×5

$+$ (35⁻) (+6)

$ac = 210$
$b = 41$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

$$7Y^2 - 26Y + 24 = 0$$

$ac = 168$
$b = 26$

(+14)   (+12)

CND 30

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y
   or CND

$x - \sqrt{2401} = 0$

$x = 49$

$\sqrt{y} - 7 = 0$

$\sqrt{y} = 7$

$y = 49$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

$x = \sqrt{16}$

$x = 4$

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y

or CND

$$21X^2 - 17X + 2 = 0$$

$(-14 \ -3) \times 8$

$\boxed{112}$ $\boxed{24}$

$\dfrac{2 \times 3}{56}$ $\boxed{8}$

$$56Y^2 - 15Y + 1 = 0$$

$(-8 \quad -7) \ 3$

$\boxed{24}$ $\boxed{21}$

20

$X \geq Y$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y
   or CND

$30x^2 - 44x + 16 = 0$

$$\frac{30}{10}$$

$(+24 \quad +20) \times 1$

$\begin{array}{c|c} 30 & 16 \\ & 4,4 \\ 6,5 \end{array}$

$(24), 20$

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

$10y^2 + 14y - 48 = 0$

$\begin{array}{c|c} 10 & 48 \\ 5,2 & 8,6 \end{array}$

$(-30 \quad +16) \times 3$

$(-90), 48$

CND

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y
   or CND

$$\frac{8}{\sqrt{x}} + \frac{3}{\sqrt{x}} = \sqrt{x}$$

$$\frac{11}{\sqrt{x}} = \sqrt{x}$$

$$\boxed{x = 11}$$

$$a^m \times a^n = a^{m+n}$$

$$\boxed{x < y}$$

$$\boxed{\sqrt{y} = y^{\frac{1}{2}}}$$

$$y^2 - \frac{(14)^{\frac{5}{2}}}{\sqrt{y}} = 0$$

$$\frac{y^{\frac{1}{2}} \times y^2}{y^{\frac{1}{2}}} - \frac{(14)^{\frac{5}{2}}}{y^{\frac{1}{2}}} = 0$$

$$y^2 \times y^{-\frac{1}{2}} - 14^{\frac{5}{2}} = 0$$

$$y^{2+\frac{1}{2}} = 14^{\frac{5}{2}}$$

$$y^{\frac{5}{2}} = 14^{\frac{5}{2}}$$

$$\boxed{y = 14}$$

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y
   or CND

$$x^2 + 3\sqrt{3}x - 84 = 0$$

28

3

$-7\sqrt{3} \quad +4\sqrt{3}$

20

$$y^2 + 9\sqrt{3}y + 60 = 0$$

3

$-5\sqrt{3} \quad -4\sqrt{3}$

CND

20

EQN SIGN	ROOT SIGN
+ , +	- , -
- , +	+ , +
- , -	+ , -
+ , -	- , +

1. X > Y
2. X < Y
3. X ≥ Y
4. X ≤ Y
5. X = Y
   or CND