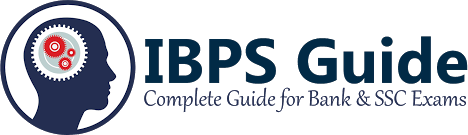


[](https://guidely.in/ultimate-bundle-pdf-course-2022?utm_source=Freepdf&utm_medium=PageBanner&utm_campaign=Bundle+PDF+2022)



Quadratic Equation

Directions (01-10): Following question contains two equations as I and II. You have to solve both equations and determine the relationship between them and give answer as,

1) I) 2x + 3y=47 II)3x + 2y = 48

A.x > y

B.x ≥ y

C.x = y or relationship can’t be determined.

D.x < y

E.x ≤ y

2) I) x2 - 23x + 120 = 0

II)y2– 14y + 48 = 0

A.x > y

B.x ≥ y

C.x = y or relationship can’t be determined.

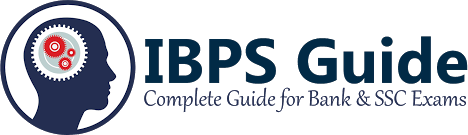
D.x < y

E.x ≤ y

3) I) x2 + 20x + 99 = 0

II)y2– 12y – 189 = 0

A.x > y



B.x ≥ y

C.x = y or relationship can’t be determined.

D.x < y

E.x ≤ y

4) I) 2x2 – 15x + 18 = 0

II)3y2– 11y + 10 = 0

A.x > y

B.x ≥ y

C.x = y or relationship can’t be determined.

D.x < y

E.x ≤ y

5) I) x2 – 17x + 42 =0

II)y2– 19y + 70 = 0

A.x > y

B.x ≥ y

C.x = y or relationship can’t be determined.

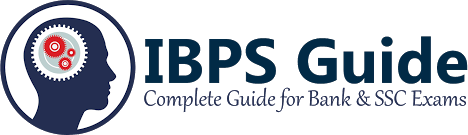
D.x < y

E.x ≤ y

6) I) x2 – 14x + 45 = 0

II) y2–20y + 99 = 0

A.x > y



B.x ≥ y

C.x = y or relationship can’t be determined.

D.x < y

E.x ≤ y

7) I) 2x2 - 13x + 18 = 0 II) y2- 13y + 42 = 0

A.x > y

B.x ≥ y

C.x = y or relationship can’t be determined.

D.x < y

E.x ≤ y

8) I) x2 + 10x – 96 = 0 II) y2+ 23y + 112 = 0

A.x > y

B.x ≥ y

C.x = y or relationship can’t be determined.

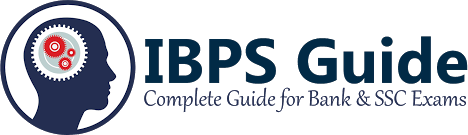
D.x < y

E.x ≤ y

9) I) 2x2 - 10x + 12 = 0

II) y2– y -2 = 0

A.x > y



B.x ≥ y

C.x = y or relationship can’t be determined.

D.x < y

E.x ≤ y

10) I) 2x2 - 30x + 112 = 0 II) y2- 18y + 80 = 0

A.x > y

B.x ≥ y

C.x = y or relationship can’t be determined.

D.x < y

E.x ≤ y

Answers :

1. Answer: A

2x + 3y = 47 (1)

3x + 2y = 48 (2)

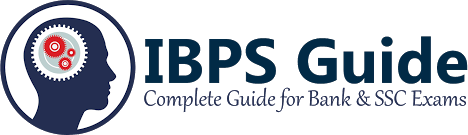
(1) \* 3 – (2) \* 2

5y = 45

y = 9

2x = 47 – 27

x = 10



x > y

1. Answer: B

x2 - 23x + 120 = 0

x2 – 15x – 8x + 120 = 0

x(x – 15) – 8(x – 15) = 0

(x – 8)(x – 15) = 0 x = 8, 15

y2 – 14y + 48 = 0

y2 – 8y – 6y + 48 = 0 y(y – 8) – 6(y – 8) = 0

(y – 6)(y – 8) = 0 y = 6, 8

x ≥ y

1. Answer: E

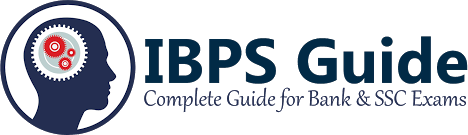
x2 + 20x + 99 = 0

x2 + 11x + 9x + 99 = 0 x(x + 11) + 9(x + 11) = 0 (x + 9)(x + 11) = 0

x = -9, -11

y2 – 12y – 189 = 0

y2 – 21y + 9x – 189 = 0



y(y – 21) + 9(x – 21) = 0

(y + 9)(y – 21) = 0 y = -9, 21

x ≤ y

1. Answer: C

2x2 – 15x + 18 = 0

2x2 – 12x – 3x + 18 = 0

2x(x – 6) – 3(x – 6) = 0

(2x – 3)(x – 6) = 0 x = 3/2, 6

3y2 – 11y + 10 = 0

3y2 – 6y – 5y + 10 = 0

3y(y – 2) – 5(y – 2) = 0

(3y – 5)(y – 2) = 0 y = 2, 5/3

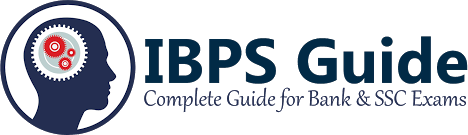
Relationship between x and y cannot be established.

1. Answer: C

x2 – 17x + 42 =0

x2 – 14x – 3x + 42 = 0 x(x – 14) – 3(x – 14) = 0

(x – 3)(x – 14) = 0



x = 3, 14

y2 – 19y + 70 = 0

y2 – 14y – 5y + 70 = 0 y(y – 14) – 5(y – 14) = 0

(y – 5)(y – 14) = 0 y = 5, 14

Relationship between x and y cannot be established.

1. Answer: E

x2 – 14x + 45 = 0

x2 – 9x - 5x + 45 = 0 x(x – 9) – 5(x – 9) = 0

(x – 5)(x – 9) = 0 x = 5, 9

y2 – 20y + 99 = 0

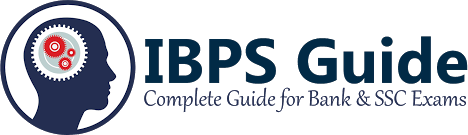
y2 – 11y – 9y + 99 = 0 y(y – 11) – 9(y – 11) = 0

(y – 9)(y – 11) = 0 y = 9, 11

x ≤ y

1. Answer: D

2x2 - 13x + 18 = 0



2x2 – 9x – 4x + 18 = 0

2x(x – 2) – 9(x – 2) = 0

(2x – 9)(x – 2) = 0 x = 9/2, 2

y2 - 13y + 42 = 0

y2 – 6y – 7y + 42 = 0 y(y – 6) – 7(y – 6) = 0

(y – 7)(y – 6) = 0 y =7, 6

x < y

1. Answer: C x2+ 10x – 96 = 0

x2+ 16x – 6x – 96 = 0 x(x + 16) – 6(x + 16) = 0 (x – 6)(x + 16) = 0

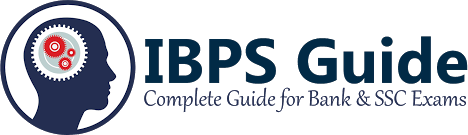
x = 6, -16

y2 + 23y + 112 = 0

y2 + 16y + 7y + 112 = 0

y(y + 16) + 7(y + 16) = 0 (y + 7)(y + 16) = 0

y = -7, -16



Relationship between x and y cannot be established.

1. Answer: B

2x2 - 10x + 12 = 0

2x2 – 6x – 4x + 12 = 0

2x(x – 3) – 4(x – 3) = 0

(2x – 4)(x – 3) = x = 2, 3

y2 – y - 2 = 0

y2 – 2y + y – 2 = 0

y(y – 2) + 1(y – 2) = 0

(y + 1)(y – 2) = 0 y = -1, 2

x ≥ y

1. Answer: E

2x2 - 30x + 112 = 0

2x2 – 16x – 14x + 112 = 0

2x(x – 8) – 14(x – 8) = 0

(2x – 14)(x – 8) = 0 x = 8, 7

y2 - 18y + 80 = 0

y2 – 10y – 8y + 80 = 0

y(y – 10) – 8(y – 10) = 0

(y – 8)(y – 10) = 0 y = 8, 10

x ≤ y

