ComputePrep

# Quadratic equation questions with answers

15 exam-shaped questions with full worked solutions.

For IBPS · SBI · SSC · Railway quant.

Free, share it forward. Every question in this set was generated and verified by the ComputePrep engine — the same one behind the free daily timed drill at **computeprep.com**.

# The questions

Work them on paper first. Full solutions start after question 15 — the numbering matches.

### QUESTION 1

**Solve both equations and state the relation between x and y.**

I. $x^2 - 4x + 3 = 0$ II. $y^2 - 10y + 24 = 0$

A. $x > y$

B. $x < y$

C. $x \geq y$

D. $x \leq y$

E. $x = y$ or no relation can be established

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### QUESTION 2

**Solve both equations and state the relation between x and y.**

I. $x^2 - 12x + 36 = 0$ II. $y^2 - 5y + 4 = 0$

A. $x > y$

B. $x < y$

C. $x \geq y$

D. $x \leq y$

E. $x = y$ or no relation can be established

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### QUESTION 3

**Solve both equations and state the relation between x and y.**

I. $x^2 + 13x + 42 = 0$ II. $y^2 + 10y + 24 = 0$

A. $x > y$

B. $x < y$

C. $x \geq y$

D. $x \leq y$

E. $x = y$ or no relation can be established

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### QUESTION 4

**Solve both equations and state the relation between x and y.**

I. $x^2 - 8x + 16 = 0$ II. $y^2 + 6y - 7 = 0$

A. $x > y$

B. $x < y$

C. $x \geq y$

D. $x \leq y$

E. $x = y$ or no relation can be established

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QUESTION 5

**Solve both equations and state the relation between x and y.**

I. $x^2 - 11x + 24 = 0$ II. $y^2 - 20y + 96 = 0$

A. x > y

B. x < y

C. x ≥ y

D. x ≤ y

E. x = y or no relation can be established

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QUESTION 6

**Solve both equations and state the relation between x and y.**

I. $2x^2 - 2x - 4 = 0$ II. $y^2 + 3y + 2 = 0$

A. x > y

B. x < y

C. x ≥ y

D. x ≤ y

E. x = y or no relation can be established

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QUESTION 7

**Solve both equations and state the relation between x and y.**

I. $x^2 - 20x + 100 = 0$ II. $y^2 - 11y + 30 = 0$

A. x > y

B. x < y

C. x ≥ y

D. x ≤ y

E. x = y or no relation can be established

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QUESTION 8

**Solve both equations and state the relation between x and y.**

I. $x^2 - 9x + 18 = 0$ II. $y^2 - 18y + 80 = 0$

A. x > y

B. x < y

C. x ≥ y

D. x ≤ y

E. x = y or no relation can be established

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QUESTION 9

**Solve both equations and state the relation between x and y.**

I. $x^2 - 6x + 8 = 0$ II. $y^2 - 4 = 0$

A. x > y

B. x < y

C. x ≥ y

D. x ≤ y

E. x = y or no relation can be established

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QUESTION 10

**Solve both equations and state the relation between x and y.**

I. $x^2 + 20x + 99 = 0$ II. $y^2 + 17y + 72 = 0$

A. x > y
B. x < y
C. x ≥ y
D. x ≤ y
E. x = y or no relation can be established

QUESTION 11

**Solve both equations and state the relation between x and y.**

I. $x^2 - 5x + 4 = 0$ II. $y^2 + 7y + 12 = 0$

A. x > y
B. x < y
C. x ≥ y
D. x ≤ y
E. x = y or no relation can be established

QUESTION 12

**Solve both equations and state the relation between x and y.**

I. $3x^2 - 18x + 24 = 0$ II. $y^2 + 5y = 0$

A. x > y
B. x < y
C. x ≥ y
D. x ≤ y
E. x = y or no relation can be established

QUESTION 13

**Solve both equations and state the relation between x and y.**

I. $x^2 - 18x + 80 = 0$ II. $y^2 - 14y + 48 = 0$

A. x > y
B. x < y
C. x ≥ y
D. x ≤ y
E. x = y or no relation can be established

QUESTION 14

**Solve both equations and state the relation between x and y.**

I. $x^2 - 8x + 12 = 0$ II. $y^2 - 19y + 90 = 0$

A. x > y
B. x < y
C. x ≥ y
D. x ≤ y
E. x = y or no relation can be established

QUESTION 15

**Solve both equations and state the relation between x and y.**

I. $x^2 - 22x + 121 = 0$ II. $y^2 - 14y + 45 = 0$

A. $x > y$

B. $x < y$

C. $x \geq y$

D. $x \leq y$

E. $x = y$ or no relation can be established

# Answers and worked solutions

Each walkthrough is the engine's own elimination order, step for step — not a reconstruction written after the fact.

### SOLUTION 1

Answer: **x < y**

1. Factorise I: $x^2 - 4x + 3 = 0 \rightarrow (x - 3)(x - 1) = 0$, so x = 1 and 3.
2. Factorise II: $y^2 - 10y + 24 = 0 \rightarrow (y - 4)(y - 6) = 0$, so y = 4 and 6.
3. Compare every x against every y — one pair is never enough.
4. The largest x (3) is still below the smallest y (4), so x < y.

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### SOLUTION 2

Answer: **x > y**

1. Factorise I: $x^2 - 12x + 36 = 0 \rightarrow (x - 6)(x - 6) = 0$, so x = 6 (twice).
2. Factorise II: $y^2 - 5y + 4 = 0 \rightarrow (y - 4)(y - 1) = 0$, so y = 1 and 4.
3. Compare every x against every y — one pair is never enough.
4. The smallest x (6) still beats the largest y (4), so x > y.

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### SOLUTION 3

Answer: **x ≤ y**

1. Factorise I: $x^2 + 13x + 42 = 0 \rightarrow (x + 7)(x + 6) = 0$, so x = -7 and -6.
2. Factorise II: $y^2 + 10y + 24 = 0 \rightarrow (y + 6)(y + 4) = 0$, so y = -6 and -4.
3. Compare every x against every y — one pair is never enough.
4. The largest x equals the smallest y (-6), and every other x is smaller — so x ≤ y, not x < y.

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### SOLUTION 4

Answer: **x > y**

1. Factorise I: $x^2 - 8x + 16 = 0 \rightarrow (x - 4)(x - 4) = 0$, so x = 4 (twice).
2. Factorise II: $y^2 + 6y - 7 = 0 \rightarrow (y - 1)(y + 7) = 0$, so y = -7 and 1.
3. Compare every x against every y — one pair is never enough.
4. The smallest x (4) still beats the largest y (1), so x > y.

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### SOLUTION 5

Answer: **x ≤ y**

1. Factorise I: $x^2 - 11x + 24 = 0 \rightarrow (x - 3)(x - 8) = 0$, so x = 3 and 8.
2. Factorise II: $y^2 - 20y + 96 = 0 \rightarrow (y - 8)(y - 12) = 0$, so y = 8 and 12.
3. Compare every x against every y — one pair is never enough.
4. The largest x equals the smallest y (8), and every other x is smaller — so x ≤ y, not x < y.

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### SOLUTION 6

Answer: **x ≥ y**

1. Factorise I: $2x^2 - 2x - 4 = 0 \rightarrow 2(x + 1)(x - 2) = 0$, so x = -1 and 2.
2. Factorise II: $y^2 + 3y + 2 = 0 \rightarrow (y + 2)(y + 1) = 0$, so y = -2 and -1.
3. Compare every x against every y — one pair is never enough.
4. The smallest x equals the largest y (-1), and every other x is larger — so x ≥ y, not x > y.

**SOLUTION 7**

Answer: **x > y**

1. Factorise I: $x^2 - 20x + 100 = 0 \rightarrow (x - 10)(x - 10) = 0$, so x = 10 (twice).
2. Factorise II: $y^2 - 11y + 30 = 0 \rightarrow (y - 6)(y - 5) = 0$, so y = 5 and 6.
3. Compare every x against every y — one pair is never enough.
4. The smallest x (10) still beats the largest y (6), so x > y.

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**SOLUTION 8**

Answer: **x < y**

1. Factorise I: $x^2 - 9x + 18 = 0 \rightarrow (x - 3)(x - 6) = 0$, so x = 3 and 6.
2. Factorise II: $y^2 - 18y + 80 = 0 \rightarrow (y - 8)(y - 10) = 0$, so y = 8 and 10.
3. Compare every x against every y — one pair is never enough.
4. The largest x (6) is still below the smallest y (8), so x < y.

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**SOLUTION 9**

Answer: **x ≥ y**

1. Factorise I: $x^2 - 6x + 8 = 0 \rightarrow (x - 2)(x - 4) = 0$, so x = 2 and 4.
2. Factorise II: $y^2 - 4 = 0 \rightarrow (y + 2)(y - 2) = 0$, so y = -2 and 2.
3. Compare every x against every y — one pair is never enough.
4. The smallest x equals the largest y (2), and every other x is larger — so x ≥ y, not x > y.

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**SOLUTION 10**

Answer: **x ≤ y**

1. Factorise I: $x^2 + 20x + 99 = 0 \rightarrow (x + 11)(x + 9) = 0$, so x = -11 and -9.
2. Factorise II: $y^2 + 17y + 72 = 0 \rightarrow (y + 9)(y + 8) = 0$, so y = -9 and -8.
3. Compare every x against every y — one pair is never enough.
4. The largest x equals the smallest y (-9), and every other x is smaller — so x ≤ y, not x < y.

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**SOLUTION 11**

Answer: **x > y**

1. Factorise I: $x^2 - 5x + 4 = 0 \rightarrow (x - 1)(x - 4) = 0$, so x = 1 and 4.
2. Factorise II: $y^2 + 7y + 12 = 0 \rightarrow (y + 4)(y + 3) = 0$, so y = -4 and -3.
3. Compare every x against every y — one pair is never enough.
4. The smallest x (1) still beats the largest y (-3), so x > y.

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**SOLUTION 12**

Answer: **x > y**

1. Factorise I: $3x^2 - 18x + 24 = 0 \rightarrow 3(x - 2)(x - 4) = 0$, so x = 2 and 4.
2. Factorise II: $y^2 + 5y = 0 \rightarrow (y - 0)(y + 5) = 0$, so y = -5 and 0.
3. Compare every x against every y — one pair is never enough.
4. The smallest x (2) still beats the largest y (0), so x > y.

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**SOLUTION 13**

Answer: **x ≥ y**

1. Factorise I: $x^2 - 18x + 80 = 0 \rightarrow (x - 8)(x - 10) = 0$, so x = 8 and 10.
2. Factorise II: $y^2 - 14y + 48 = 0 \rightarrow (y - 6)(y - 8) = 0$, so y = 6 and 8.
3. Compare every x against every y — one pair is never enough.
4. The smallest x equals the largest y (8), and every other x is larger — so x ≥ y, not x > y.

## SOLUTION 14

Answer: **x < y**

1. Factorise I: $x^2 - 8x + 12 = 0 \rightarrow (x - 2)(x - 6) = 0$, so x = 2 and 6.
2. Factorise II: $y^2 - 19y + 90 = 0 \rightarrow (y - 9)(y - 10) = 0$, so y = 9 and 10.
3. Compare every x against every y — one pair is never enough.
4. The largest x (6) is still below the smallest y (9), so x < y.

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## SOLUTION 15

Answer: **x > y**

1. Factorise I: $x^2 - 22x + 121 = 0 \rightarrow (x - 11)(x - 11) = 0$, so x = 11 (twice).
2. Factorise II: $y^2 - 14y + 45 = 0 \rightarrow (y - 5)(y - 9) = 0$, so y = 5 and 9.
3. Compare every x against every y — one pair is never enough.
4. The smallest x (11) still beats the largest y (9), so x > y.

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