Equations

Directions (1 - 20): In the following questions two equations numbered I and II are given. You have to solve both the equations and

Give answer 1) if x > y

Give answer 2) if x ≥ y

Give answer 3) if x < y

Give answer 4) if x ≤ y

Give answer 5) if x = y or the relationship cannot be established

Model 1: Linear Equations

1. I. $6x + 7y = 93$ II. $3x + 2y = 33$

2. I. $\sqrt{36}\,x + \sqrt{64} = 0$ II. $\sqrt{81}y + 4^2 = 0$

3. I. $\frac{9}{\sqrt{x}} + \frac{19}{\sqrt{x}} = \sqrt{x}$ II. $y^5 - \frac{(2\times14)^{11/2}}{\sqrt{y}} = 0$

Model 2: Quadratic Equations

4. I. $x^2 - 10x + 21 = 0$ II. $y^2 - 16y + 63 = 0$

5. I. $17x^2 + 48x = 9$ II. $13y^2 = 32y - 12$

6. I. $x^2 - (16)^2 = (23)^2 - 56$ II. $y^{1/3} - 55 + 376 = (18)^2$

7. I. $\frac{\mathbf{12}}{\sqrt{x}} + \frac{\mathbf{8}}{\sqrt{x}} = \sqrt{x}$ II. $y - \frac{18^{9/2}}{\sqrt{y}} = 0$

8. I. $\frac{25}{\sqrt{x}} + \frac{9}{\sqrt{x}} = 17\sqrt{x}$ II. $\frac{\sqrt{y}}{3} + \frac{5\sqrt{y}}{6} = \frac{3}{\sqrt{y}}$

9. I. $x^2 - 468 = 1729$ II. $y^2 - 1733 + 1564 = 0$

10. I. $\sqrt{784}\,x + 1234 = 1486$ II. $\sqrt{1089}y + 2081 = 2345$

11. I. $\frac{12}{\sqrt{x}} - \frac{23}{\sqrt{x}} = 5\sqrt{x}$ II. $\frac{\sqrt{y}}{12} - \frac{5\sqrt{y}}{12} = \frac{1}{\sqrt{y}}$

12. I. $4x + 7y = 209$ II. $12x - 14y = -38$

13. I. $16x^2 + 20x + 6 = 0$ II. $10y^2 + 38y + 24 = 0$

14. I. $8x^2 + 6x = 5$ II. $12y^2 - 22y + 8 = 0$

15. I. $18x^2 + 18x + 4 = 0$ II. $12y^2 + 29y + 14 = 0$

16. I. $\sqrt{25\,x^2} - 125 = 0$ II. $\sqrt{361}y + 95 = 0$

17. I. $\frac{5}{7} - \frac{5}{21} = \frac{\sqrt{x}}{42}$ II. $\frac{\sqrt{y}}{4} + \frac{\sqrt{y}}{16} = \frac{250}{y}$

18. I. $(625)^{1/4}\,x + \sqrt{1225} = 155$ II. $\sqrt{196}y + 13 = 279$

19. I. $5x^2 - 18x + 9 = 0$ II. $3y^2 + 5y - 2 = 0$

20. I. $\frac{13}{\sqrt{x}} + \frac{9}{\sqrt{x}} = \sqrt{x}$ II. $y^4 - \frac{(13\times2)^{9/2}}{\sqrt{y}} = 0$

Answers

1 - 3	2 - 1	3 - 5	4 - 4	5 - 3	6 - 4	7 - 3	8 - 3	9 - 5	10 - 1
11 - 1	12 - 5	13 - 1	14 - 4	15 - 2	16 - 1	17 - 3	18 - 1	19 - 1	20 - 3