EduSahara™ Assignment

Name : Simultaneous Equations Complex Problems

Chapter : Pair of Linear Equations in Two Variables

Grade : SSC Grade X

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Solve the following pair of equations :

1.

$$\frac{11}{x} + \frac{16}{y} = (-19)$$

$$-\frac{3}{x} + \frac{1}{y} = (-27)$$

(i) $(\frac{1}{9}, (\frac{-1}{6}))$ (ii) $(\frac{3}{7}, (\frac{-1}{6}))$ (iii) $(\frac{1}{7}, (\frac{-1}{8}))$ (iv) $(\frac{1}{7}, \frac{1}{6})$ (v) $(\frac{1}{7}, (\frac{-1}{6}))$

Solve the following pair of equations :

2.

$$17x + \frac{4}{y} = (-19)$$

$$10x + \frac{10}{y} = (-80)$$

(i) $(1, \frac{1}{9})$ (ii) $(1, (\frac{-1}{11}))$ (iii) $(2, (\frac{-1}{9}))$ (iv) $(3, (\frac{-1}{9}))$ (v) $(1, (\frac{-1}{9}))$

Solve the following pair of equations :

3.

$$-\frac{2}{x} - 9y = 51$$

$$\frac{10}{x} + 4y = (-50)$$

(i) $(-1, -5)$ (ii) $((\frac{-1}{3}), -6)$ (iii) $((\frac{-1}{3}), -5)$ (iv) $((\frac{-1}{3}), -7)$

4. Solve the following pair of equations :

$$\frac{8}{(x+y)} + \frac{13}{(x-y)} = 9$$

$$\frac{4}{(x+y)} - \frac{1}{(x-y)} = 27$$

(i) $(\frac{1}{12}, \frac{1}{4})$ (ii) $((\frac{-1}{14}), \frac{1}{4})$ (iii) $((\frac{-1}{12}), \frac{1}{2})$ (iv) $((\frac{-1}{12}), \frac{1}{4})$ (v) $((\frac{-1}{12}), (\frac{-1}{4}))$

5. Solve the following pair of equations :

$$-\frac{3}{(x+y)} - \frac{5}{(x-y)} = 38$$

$$\frac{4}{(x+y)} - \frac{3}{(x-y)} = (-12)$$

(i) $((\frac{-5}{24}), (\frac{-1}{24}))$ (ii) $((\frac{-5}{24}), \frac{1}{24})$ (iii) $((\frac{-5}{24}), \frac{1}{22})$ (iv) $((\frac{-5}{26}), \frac{1}{24})$ (v) $((\frac{-1}{8}), \frac{1}{24})$

6. Solve the following pair of equations :

$$-\frac{11}{(x+2)} - \frac{2}{(y-1)} = (-87)$$

$$-\frac{5}{(x+2)} + \frac{11}{(y-1)} = 20$$

(i) $((\frac{-13}{7}), -1)$ (ii) $((\frac{-13}{7}), \frac{6}{5})$ (iii) $(2, \frac{6}{5})$ (iv) $(1, \frac{6}{5})$ (v) $((\frac{-13}{7}), -3)$

7. Solve the following pair of equations :

$$(4x+2y) = 6xy$$

$$(-8x-8y) = (-8xy)$$

(i) $(\frac{1}{-1}, \frac{1}{2})$ (ii) $(\frac{1}{-1}, 1)$ (iii) $(0, \frac{1}{2})$ (iv) $(\frac{1}{-1}, (\frac{-1}{2}))$ (v) $(1, \frac{1}{2})$

8. Solve the following pair of equations :

$$\frac{(x+8y)}{xy} = 41$$

$$\frac{(6x-7y)}{xy} = -29$$

(i) $(\frac{1}{7}, \frac{1}{1})$ (ii) $(\frac{1}{5}, -1)$ (iii) $(\frac{1}{5}, 0)$ (iv) $(\frac{3}{5}, \frac{1}{1})$ (v) $(\frac{1}{5}, \frac{1}{1})$

Solve the following pair of equations :

9. $\frac{11}{\sqrt{x}} + \frac{10}{\sqrt{y}} = 58$

$\frac{10}{\sqrt{x}} + \frac{1}{\sqrt{y}} = 77$

(i) $(\frac{3}{64}, \frac{1}{9})$ (ii) $(\frac{1}{64}, (\frac{-1}{9}))$ (iii) $(\frac{1}{64}, \frac{1}{9})$ (iv) $(\frac{1}{64}, \frac{1}{7})$ (v) $(\frac{1}{66}, \frac{1}{9})$

Solve the following pair of equations :

10. $-\frac{15}{x} - \frac{3}{y} = 42$

$-\frac{12}{x} - \frac{6}{y} = 12$

(i) $((\frac{-1}{4}), \frac{1}{6})$ (ii) $((\frac{-1}{4}), (\frac{-1}{6}))$ (iii) $((\frac{-3}{4}), \frac{1}{6})$ (iv) $((\frac{-1}{2}), \frac{1}{6})$ (v) $((\frac{-1}{4}), \frac{1}{4})$

Solve the following pair of equations :

11. $-x - \frac{2}{y} = 7$

$-3x + \frac{2}{y} = (-19)$

(i) $(3, (\frac{-1}{5}))$ (ii) $(4, (\frac{-1}{5}))$ (iii) $(3, (\frac{-1}{7}))$ (iv) $(3, \frac{1}{5})$ (v) $(5, (\frac{-1}{5}))$

Solve the following pair of equations :

12. $\frac{3}{x} + 7y = 36$

$\frac{1}{x} + 6y = 23$

(i) $(\frac{1}{5}, 1)$ (ii) $(\frac{1}{5}, 2)$ (iii) $(\frac{3}{5}, 3)$ (iv) $(\frac{1}{5}, 3)$ (v) $(\frac{1}{7}, 3)$

13. Solve the following pair of equations :

$$\frac{7}{(x+y)} - \frac{14}{(x-y)} = 28$$

$$\frac{10}{(x+y)} - \frac{9}{(x-y)} = (-15)$$

(i) $(\frac{-11}{62}, \frac{1}{60})$ (ii) $(\frac{-11}{60}, \frac{1}{58})$ (iii) $(\frac{-11}{60}, \frac{1}{60})$ (iv) $(\frac{-11}{60}, \frac{-1}{60})$ (v) $(\frac{-3}{20}, \frac{1}{60})$

14. Solve the following pair of equations :

$$\frac{1}{(x+y)} - \frac{4}{(x-y)} = (-21)$$

$$\frac{3}{(x+y)} - \frac{14}{(x-y)} = (-71)$$

(i) $(\frac{1}{40}, \frac{-9}{38})$ (ii) $(\frac{1}{40}, \frac{-9}{40})$ (iii) $(\frac{1}{42}, \frac{-9}{40})$ (iv) $(\frac{3}{40}, \frac{-9}{40})$ (v) $(\frac{1}{40}, \frac{-11}{40})$

15. Solve the following pair of equations :

$$-\frac{8}{(x-5)} - \frac{1}{(y-4)} = 38$$

$$-\frac{4}{(x-5)} - \frac{4}{(y-4)} = 12$$

(i) $(\frac{24}{5}, -1)$ (ii) $(2, \frac{9}{2})$ (iii) $(1, \frac{9}{2})$ (iv) $(\frac{24}{5}, -2)$ (v) $(\frac{24}{5}, \frac{9}{2})$

16. Solve the following pair of equations :

$(-11x-6y) = 75xy$

$(-8x+y) = 17xy$

(i) $(\frac{-1}{7}, \frac{-1}{3})$ (ii) $(\frac{-1}{5}, \frac{-1}{3})$ (iii) $(\frac{-1}{7}, \frac{1}{3})$ (iv) $(\frac{-3}{7}, \frac{-1}{3})$ (v) $(\frac{-1}{7}, \frac{-1}{5})$

17. Solve the following pair of equations :

$$\frac{(2x+6y)}{xy} = 4$$

$$\frac{(4x+10y)}{xy} = 2$$

(i) $(1, \frac{-1}{7})$ (ii) $(\frac{1}{3}, \frac{-1}{7})$ (iii) $(\frac{1}{3}, \frac{-1}{9})$ (iv) $(\frac{1}{3}, \frac{1}{7})$ (v) $(\frac{1}{5}, \frac{-1}{7})$

Solve the following pair of equations :

18. $\frac{6}{\sqrt{x}} - \frac{15}{\sqrt{y}} = 12$

$\frac{2}{\sqrt{x}} - \frac{1}{\sqrt{y}} = -12$

(i) $(\frac{1}{64}, \frac{1}{14})$ (ii) $(\frac{1}{64}, \frac{1}{16})$ (iii) $(\frac{3}{64}, \frac{1}{16})$ (iv) $(\frac{1}{64}, (\frac{-1}{16}))$ (v) $(\frac{1}{66}, \frac{1}{16})$

Assignment Key

1) (v)	2) (v)	3) (iii)	4) (iv)	5) (ii)	6) (ii)
7) (i)	8) (v)	9) (iii)	10) (i)	11) (i)	12) (iv)
13) (iii)	14) (ii)	15) (v)	16) (i)	17) (ii)	18) (ii)

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