1 (i) $2x+4y=3$

$12y+6x=6$

$\Rightarrow 6x+12y=6$

$\frac{a_1}{a_2}=\frac{2}{6}=\frac{1}{3}, \frac{b_1}{b_2}=\frac{4}{12}=\frac{1}{3}, \frac{c_1}{c_2}=\frac{3}{6}=\frac{1}{2}$

$\because \frac{a_1}{a_2}=\frac{b_1}{b_2}\neq\frac{c_1}{c_2}$

$\therefore$ no solution (True)

(ii) $x-2y=0$

$2x-y=0$

$\frac{a_1}{a_2}=\frac{1}{2}, \frac{b_1}{b_2}=\frac{-2}{-1}=\frac{2}{1}$

$\because \frac{a_1}{a_2}\neq\frac{b_1}{b_2}$

unique sol. (False)

(iii) $3x+y-3=0$

$2x+\frac{2}{3}y-2=0$

$\frac{a_1}{a_2}=\frac{3}{2} \mid \frac{b_1}{b_2}=\frac{1}{2/3}=\frac{3}{2} \mid \frac{c_1}{c_2}=\frac{-3}{-2}=\frac{3}{2}$

$\because \frac{a_1}{a_2}=\frac{b_1}{b_2}=\frac{c_1}{c_2}$

In. Many Sols (False)

2 (i) $3x+\frac{1}{7}y=3$

$7x+3y=7$

$\frac{a_1}{a_2}=\frac{3}{7} \mid \frac{b_1}{b_2}=\frac{\frac{1}{7}}{3}=\frac{1}{21} \mid \frac{c_1}{c_2}=\frac{3}{7}$

$\because \frac{a_1}{a_2}\neq\frac{b_1}{b_2}$

$\therefore$ Unique Sol. (False)

(ii) $-2x-3y=1$

$6y+4x=-2$

$\Rightarrow 4x+6y=-2$

$\frac{a_1}{a_2}=\frac{-2}{4}=-\frac{1}{2} \mid \frac{b_1}{b_2}=-\frac{3}{6}=-\frac{1}{2} \mid \frac{c_1}{c_2}=\frac{1}{-2}$

$\because \frac{a_1}{a_2}=\frac{b_1}{b_2}=\frac{c_1}{c_2}$

$\therefore$ coincident lines (True)

(iii) $\frac{x}{2}+y+\frac{2}{5}=0$

$4x+8y+\frac{5}{16}=0$

$\frac{a_1}{a_2}=\frac{1/2}{4}=\frac{1}{8} \mid \frac{b_1}{b_2}=\frac{1}{8} \mid \frac{c_1}{c_2}=\frac{2/5}{5/16}=\frac{2}{5}\times\frac{16}{5}=\frac{32}{25}$

$\because \frac{a_1}{a_2}=\frac{b_1}{b_2}\neq\frac{c_1}{c_2}$

$\therefore$ unique sol (False)