DevAnoop.Me

(5) $x - 3y = 2$, $-2x + 6y = 5$

$\frac{a_1}{a_2} = \frac{1}{-2} = -\frac{1}{2}$ | $\frac{b_1}{b_2} = \frac{-3}{6} = -\frac{1}{2}$ | $\frac{c_1}{c_2} = \frac{2}{5}$

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

$\therefore$ paths do not cross each other.

(6) $x = -1, y = 3$

reqd. pair of eqns $x + y = 2$
$2x + y = 1$

Inf. Many such pair are possible.

(7) $2x + y = 23$ ---(I), $4x - y = 19$ ---(II)

(I) + (II)

$2x + y = 23$
$4x - y = 19$
$6x = 42$
$\Rightarrow x = \frac{42}{6}$
$= 7$

Sub (I)

$2 \times 7 + y = 23$
$y = 23 - 14$
$= 9$

$\therefore x = 7, y = 9$

(a) $5y - 2x$
$= 5 \times 9 - 2 \times 7$
$= 45 - 14$
$= 31$

(b) $\frac{y}{x} - 2$
$\frac{9}{7} - 2$
$= \frac{9 - 14}{7}$
$= -\frac{5}{7}$