Solve each system by elimination.

Eliminate either x or y

1) $10x - 2y = 8$

2) $20x + 3y = 23$

① $\times -2$

$-20x + 4y = -16$

$+ \quad 20x + 3y = 23$

$7y = 7$

$\frac{7y}{7} = \frac{7}{7}$

$y = 1$

② sub y in ②

$20x + 3(1) = 23$

$20x + 3 = 23$

$-3 \quad -3$

$\frac{20x}{20} = \frac{20}{20}$

$x = 1$

③ check in ①

$10x - 2y$

$10(1) - 2(1)$

$10 - 2$

8

8

Solve each system by elimination.

4) $\frac{8}{7} = -x + \frac{3}{7}y$

$-10x = -10y$

① ②

$\frac{8}{7} = \frac{-x}{1} + \frac{3}{7}y$

$\frac{8}{7} = \frac{-7x}{7} + \frac{3}{7}y$

$8 = -7x + 3y$

$-10x = -10y$

$\begin{pmatrix} 8 = -7x + 3y \\ 0 = 10x - 10y \end{pmatrix}$ 10

$80 = -70x + 30y$

$0 = 30x - 30y$

$\frac{80}{-40} = \frac{-40x}{-40}$

$x = -2$

check in ②

$-10x$	$-10y$
$-10(-2)$	$-10(-2)$
20	20

Solve each system by substitution.

①

7) $-5x + 8y = -5$

$x - 3y = 8$

① isolate x in ②

$x = 3y + 8$

② substitute x into ①

$-5(3y + 8) + 8y = -5$

$-15y - 40 + 8y = -5$

$+40 \quad +40$

$-7y = 35$

$\frac{-7y}{-7} = \frac{35}{-7}$

$y = -5$

③ sub y in ②

$x - 3(-5) = 8$

$x + 15 = 8$

$-15 \quad -15$

$x = -7$

④ check in ①

$-5x + 8y = -5$

$-5(-7) + 8(-5) = -5$

$35 - 40 = -5$

$-5 = -5$