

**1** Use the elimination method to solve simultaneously each pair of equations by first adding the equations together.

**a**  $x + y = 9$

$x - y = 1$

**d**  $x + 2y = 3$

$x - 2y = 7$

**g**  $x + 3y = 10$

$-x + y = 6$

**j**  $2x + 7y = 5$

$x - 7y = 16$

**b**  $x + y = 14$

$2x - y = 1$

**e**  $3x - 2y = 5$

$x + 2y = 7$

**h**  $-x + 2y = 12$

$x + 2y = -4$

**k**  $5x - 2y = 0$

$4x + 2y = 9$

**c**  $2x + y = 7$

$x - y = 2$

**f**  $5x - 2y = 1$

$3x + 2y = 7$

**i**  $3x + y = 11$

$-3x + 2y = 10$

**l**  $7x + 5y = -3$

$2x - 5y = 21$

**2** By first subtracting to eliminate a pronumeral, solve each pair of equations.

**a**  $2x + y = 5$

$x + y = 3$

**d**  $3x - 2y = 0$

$x - 2y = 4$

**g**  $2x + y = 10$

$x + y = 7$

**j**  $6x + y = 13$

$6x - y = 11$

**b**  $5x + y = 7$

$3x + y = 1$

**e**  $5x - y = 14$

$2x - y = 2$

**h**  $2x + 5y = 7$

$2x + y = 5$

**k**  $2x + 5y = 20$

$3x + 5y = 17$

**c**  $10x + 2y = 2$

$7x + 2y = -1$

**f**  $x - 3y = 1$

$2x - 3y = 5$

**i**  $5x - y = 16$

$5x - 3y = 8$

**l**  $7x - 2y = 1$

$4x - 2y = 4$

**3** Solve these simultaneous equations by the elimination method.

**a**  $2x + y = 7$

$x - y = -4$

**d**  $3x + 2y = 2$

$x - 2y = -10$

**g**  $5x + 2y = 1$

$3x - 2y = 7$

**b**  $x + y = 5$

$2x - y = 1$

**e**  $2x + 3y = 13$

$4x - 3y = -1$

**h**  $7x - 3y = 31$

$7x + y = -1$

**c**  $x - y = 12$

$2x + y = 3$

**f**  $3x + 4y = -1$

$3x - 2y = -10$

**i**  $8x - 2y = 34$

$8x + 4y = 4$

**4** After multiplying either, or both of the equations by a constant, use the elimination method to solve each pair of equations.

**a**  $x + y = 7$

$2x + 3y = 17$

**d**  $4x - y = 10$

$x + 3y = 9$

**b**  $2x + y = 7$

$x + 2y = 11$

**e**  $4x - y = 6$

$3x + 2y = -1$

**c**  $5x + y = 12$

$3x + 2y = 10$

**f**  $5x - 2y = -16$

$x + 3y = 7$