

Practice Sheet - Solving Systems of Equations

1. ① $4x + 3y = 1$ Using substitution:

② $x = 1 - y$

Sub $y = 3$ into ②

$$x = 1 - y$$

$$x = 1 - 3$$

$$\boxed{x = -2}$$

$$4x + 3y = 1$$

$$4(1 - y) + 3y = 1$$

$$4 - 4y + 3y = 1$$

$$4 - y = 1$$

$$-y = 1 - 4$$

$$-y = -3$$

$$\boxed{y = 3}$$

The solution is: $(-2, 3)$

5. ① $2x + 3y = 6$

② $x - 3y = -15 \rightarrow x = 3y - 15$

Substitute $x = 3y - 15$ into ①

$$2x + 3y = 6$$

$$2(3y - 15) + 3y = 6$$

$$6y - 30 + 3y = 6$$

$$9y - 30 = 6 + 30$$

$$\frac{9y}{9} = \frac{36}{9}$$

$$\boxed{y = 4}$$

The solution is $(-3, 4)$

Sub $y = 4$ into ②

$$x - 3y = -15$$

$$x - 3(4) = -15$$

$$x - 12 = -15$$

$$+12 \quad +12$$

$$\boxed{x = -3}$$

