# Graphs of Linear Equations in Two Unknowns

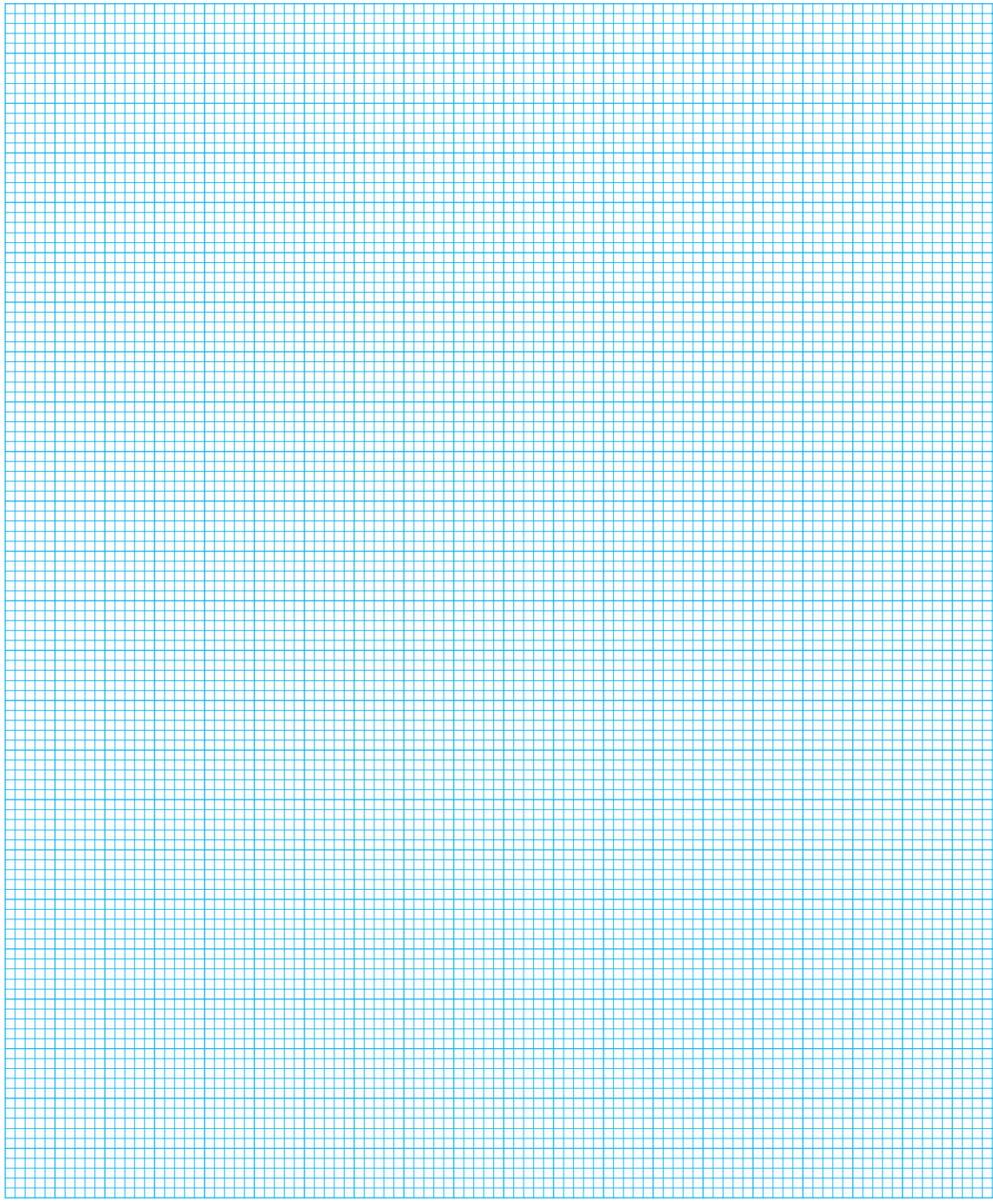
**1.** Using 2 cm to represent 1 unit on both axes for $-3 \leqslant x \leqslant 4$, solve the pair of simultaneous equations below graphically.

$$x - 3y + 5 = 0$$
$$3x + 6y - 22.5 = 0$$

**2.** (a) On the same graph paper, draw the graphs of the equations $3y = -4x + 20$ and $3y = x + 10$ for $-4 \leqslant x \leqslant 4$.

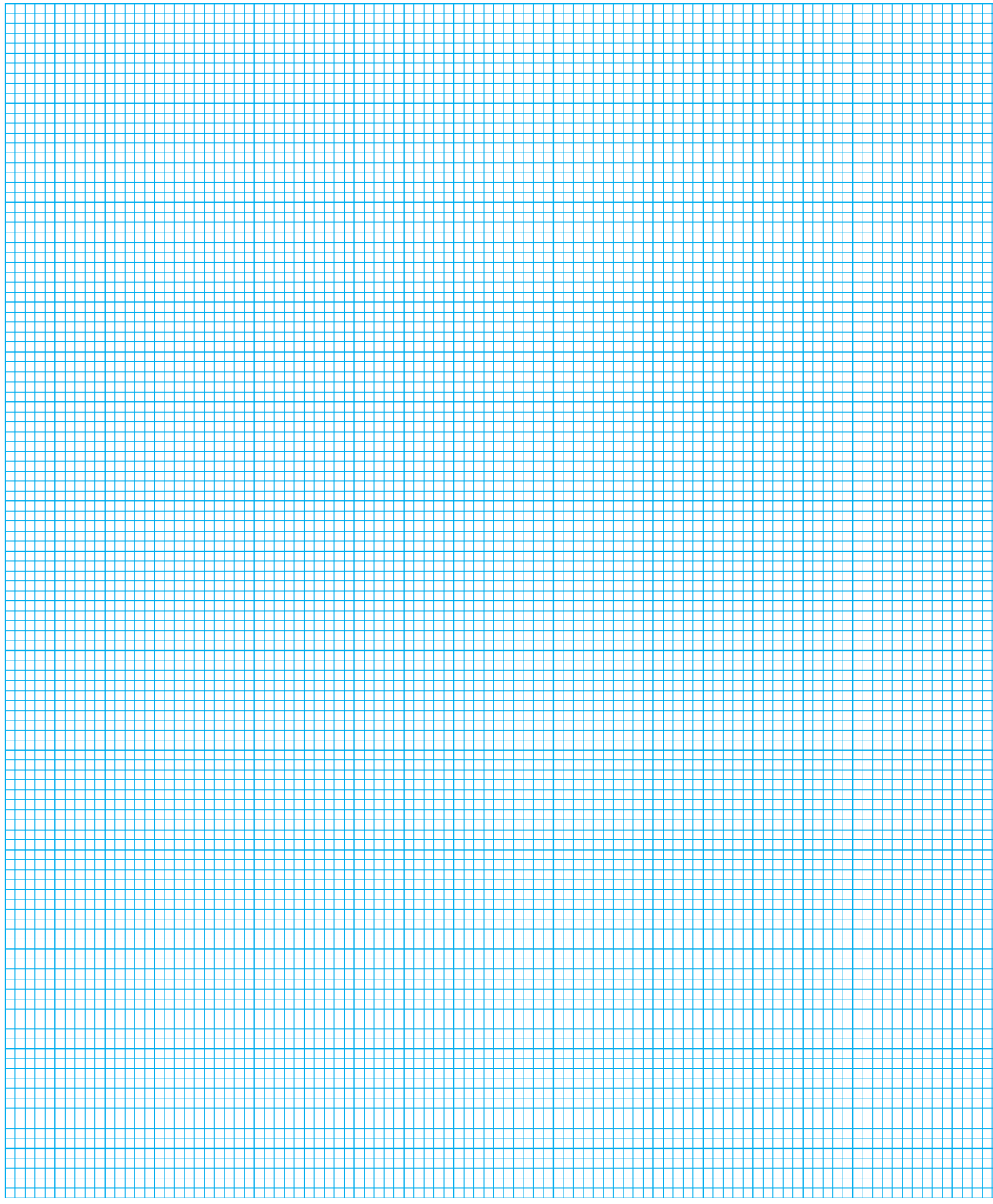
(b) Hence, solve, graphically, the simultaneous equations.

$$3y = -4x + 20$$
$$3y = x + 10$$



**3.** Using 2 cm to represent 1 unit on $y$-axis and 1 cm to represent 1 unit on $x$-axis for $-6 \leqslant x \leqslant 6$, solve the pair of simultaneous equations by the graphical method.

$$5y + 4x = 23$$
$$3y - x = 24$$



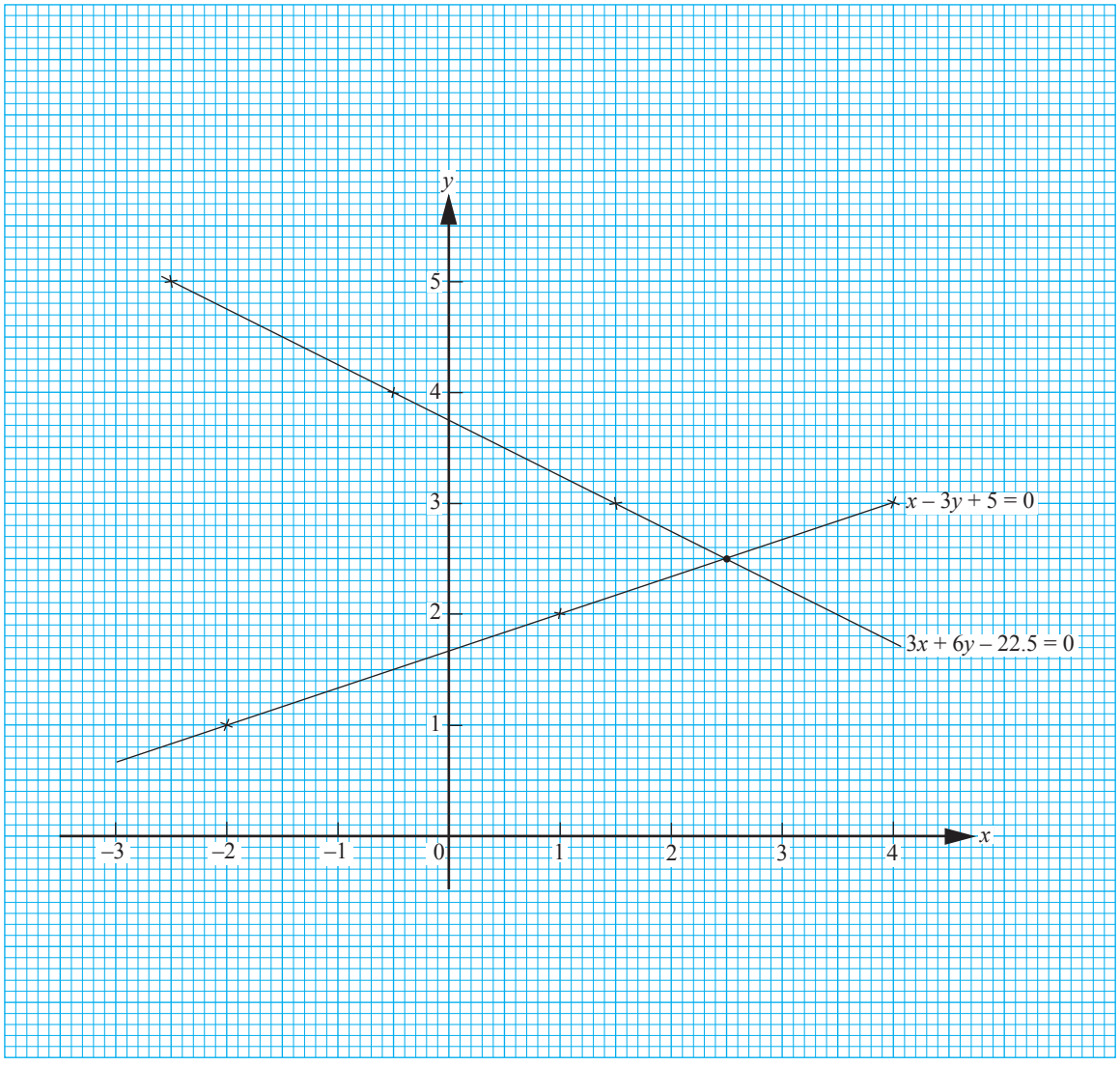
# Graphs of Linear Equations in Two Unknowns

**1.** $x - 3y + 5 = 0$

| $x$ | –2 | 1 | 4 |
|---|---|---|---|
| $y$ | 1 | 2 | 3 |

$3x + 6y - 22.5 = 0$

| $x$ | –2.5 | –0.5 | 1.5 |
|---|---|---|---|
| $y$ | 5 | 4 | 3 |



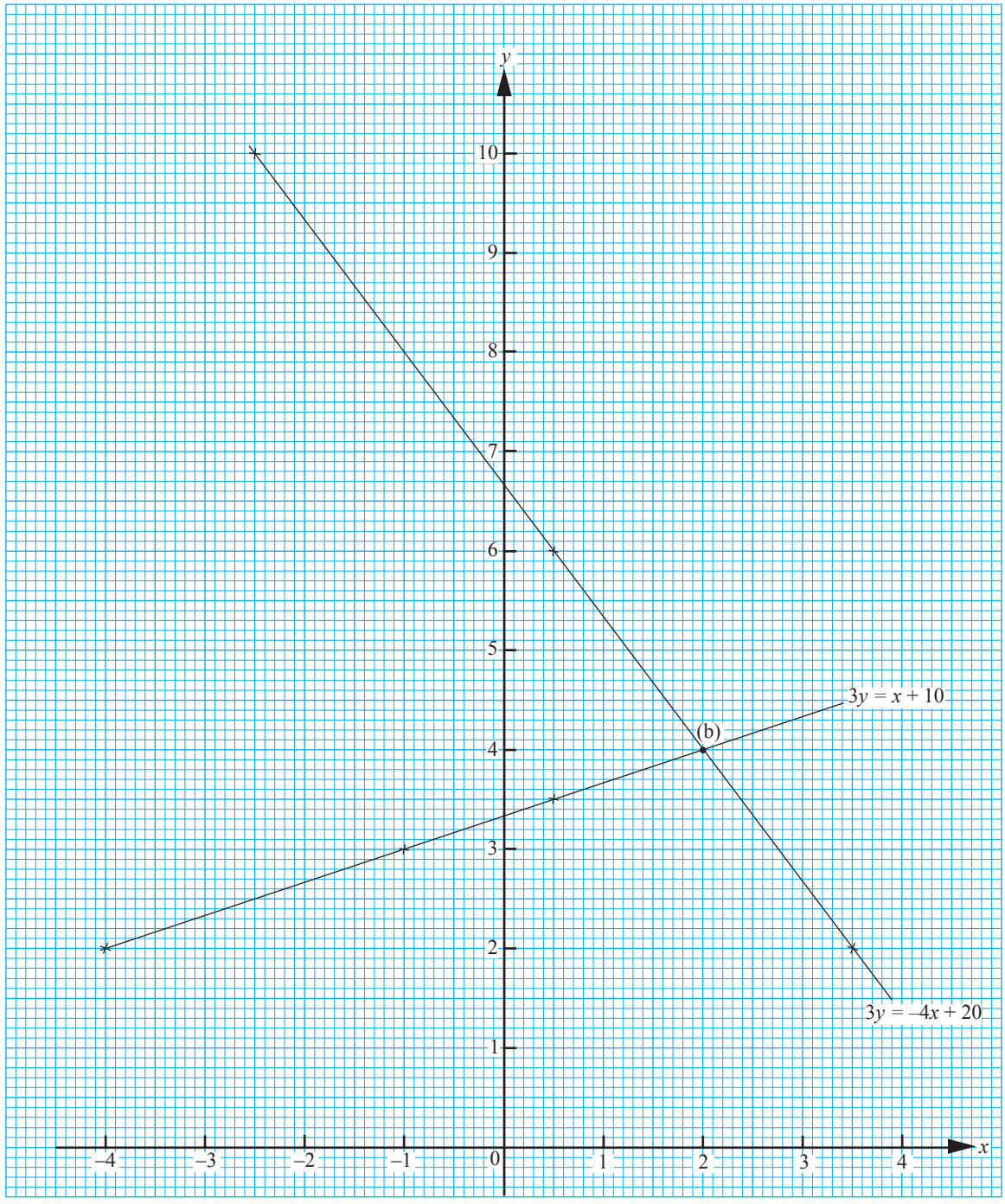

The solution is $x = 2.5$, $y = 2.5$.

**2.** (a) $3y = -4x + 20$

| $x$ | –2.5 | 0.5 | 3.5 |
|---|---|---|---|
| $y$ | 10 | 6 | 2 |

$3y = x + 10$

| $x$ | –4 | –1 | 0.5 |
|---|---|---|---|
| $y$ | 2 | 3 | 3.5 |



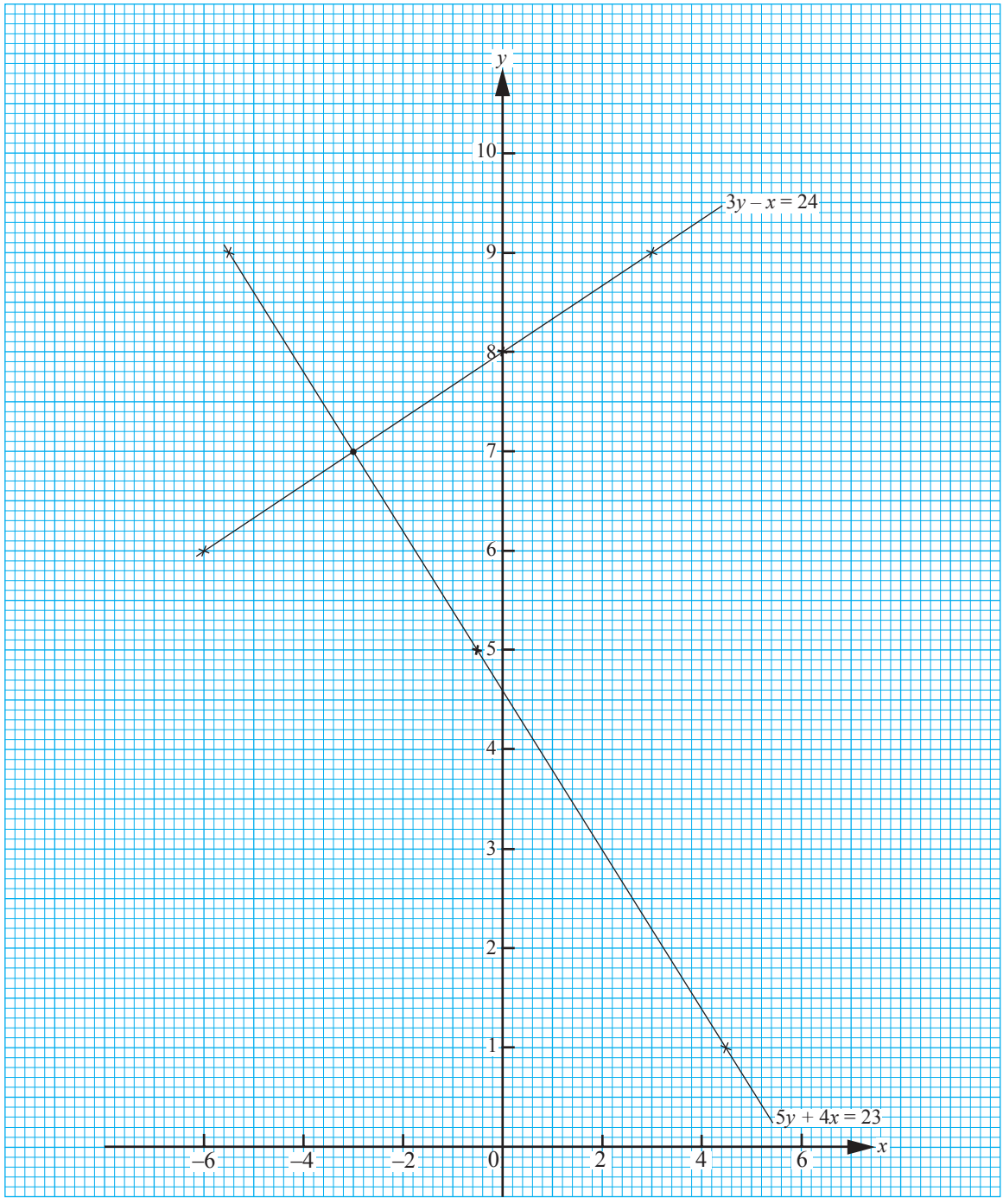

(b) The solution is $x = 2$, $y = 4$.

**3.** $5y + 4x = 23$

| $x$ | –5.5 | –0.5 | 4.5 |
|---|---|---|---|
| $y$ | 9 | 5 | 1 |

$3y - x = 24$

| $x$ | –6 | 0 | 3 |
|---|---|---|---|
| $y$ | 6 | 8 | 9 |




The solution is $x = -3$, $y = 7$.