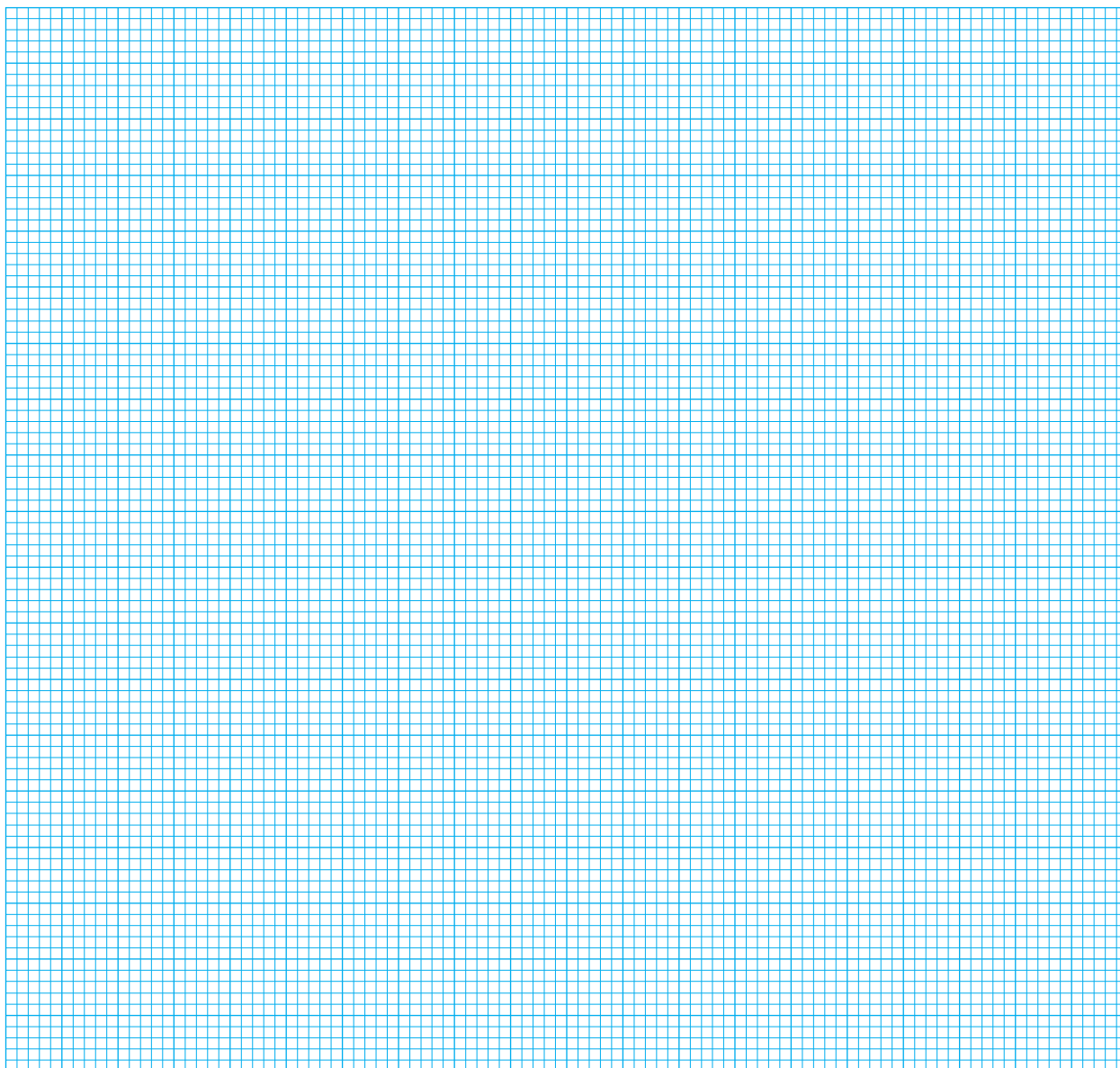


# Graphs of Linear Equations in Two Unknowns

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

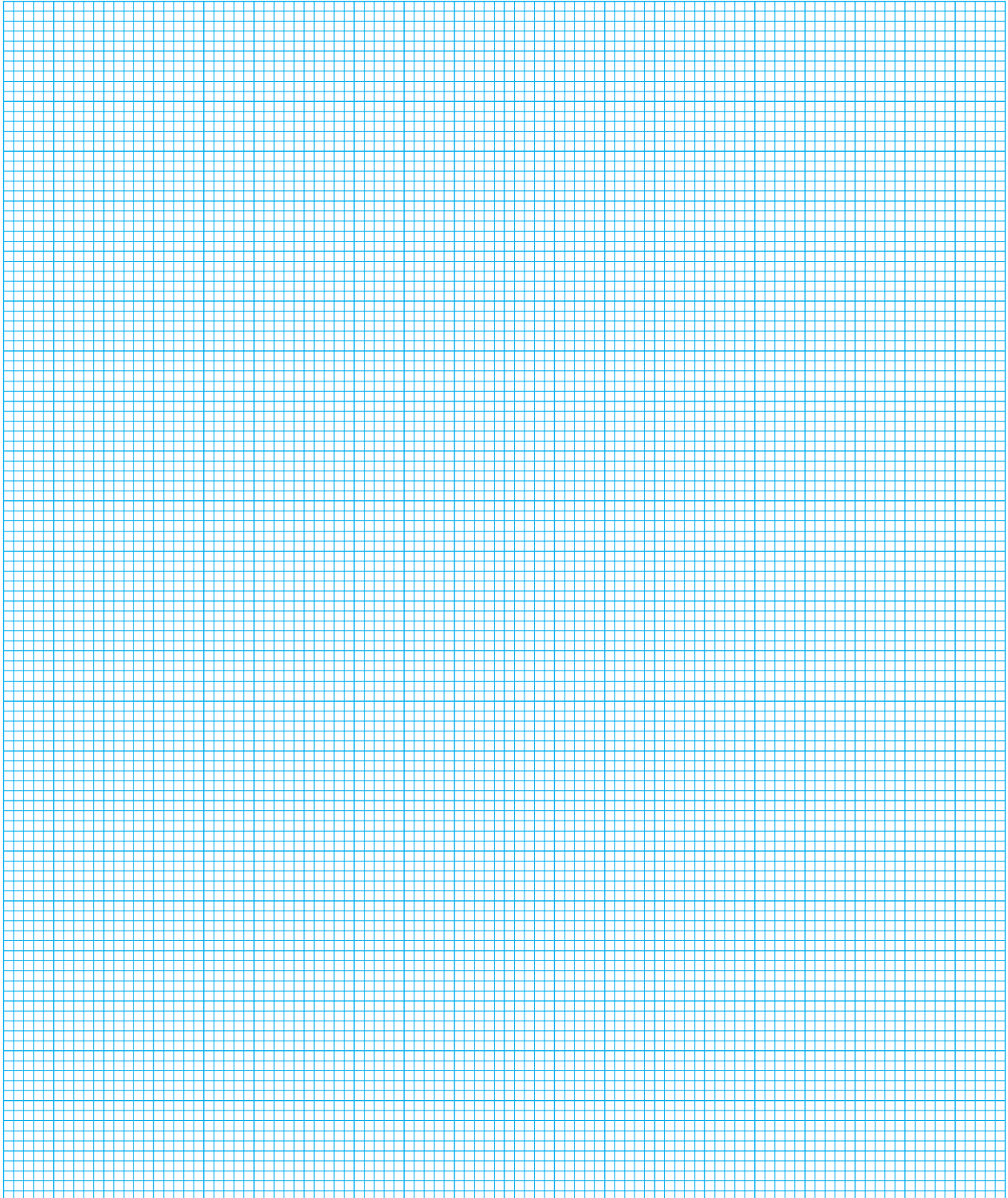
$$\begin{aligned}x - 3y + 5 &= 0 \\3x + 6y - 22.5 &= 0\end{aligned}$$



2. (a) On the same graph paper, draw the graphs of the equations  $3y = -4x + 20$  and  $3y = x + 10$  for  $-4 \leq x \leq 4$ .  
(b) Hence, solve, graphically, the simultaneous equations.

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

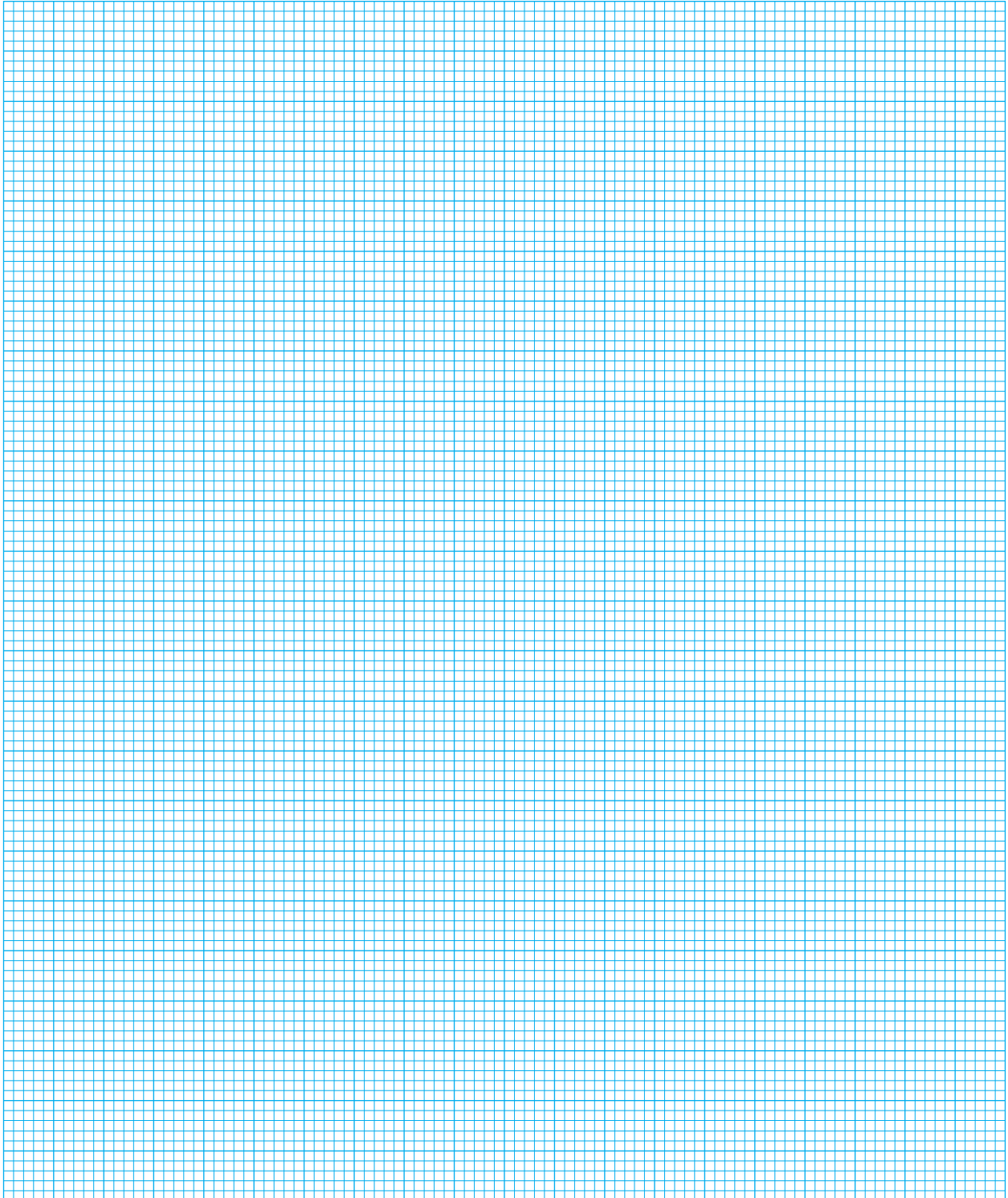
$$3y = x + 10$$



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

$$5y + 4x = 23$$

$$3y - x = 24$$



Adapted:

**maths@mavis Lower Secondary Numbers, Functions & Graphs**

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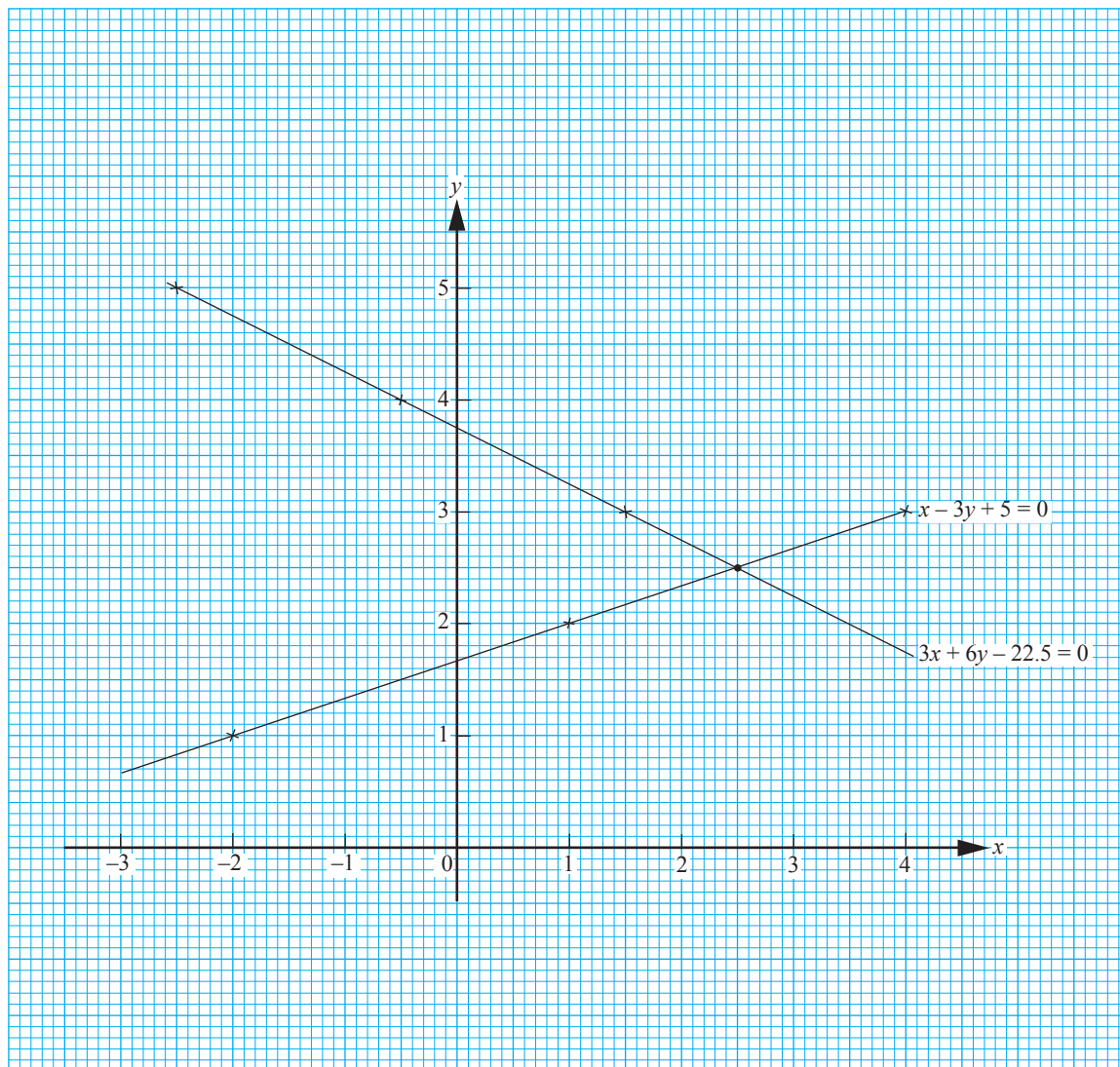
# Graphs of Linear Equations in Two Unknowns

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



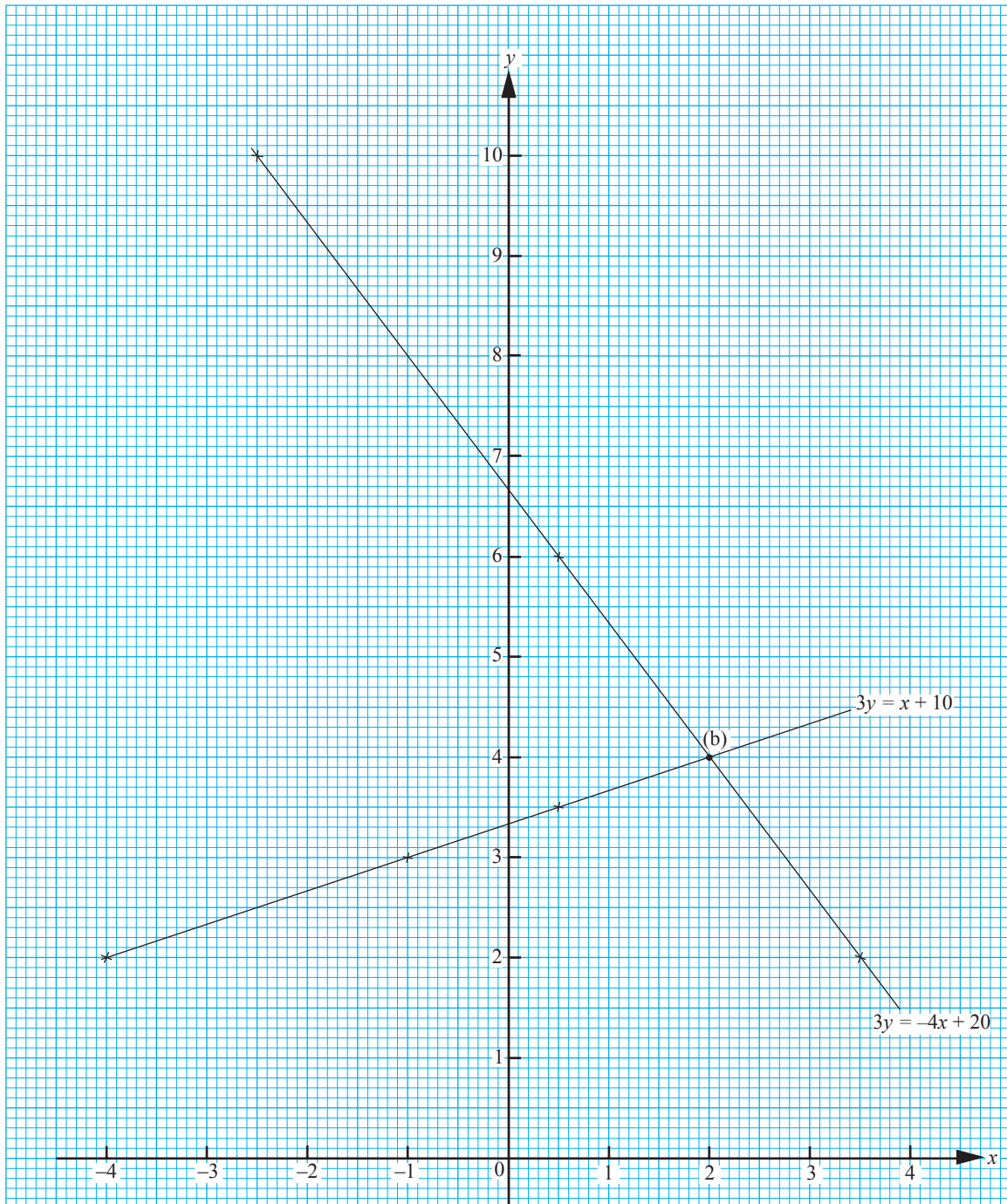
The solution is  $x = 2.5, y = 2.5$ .

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



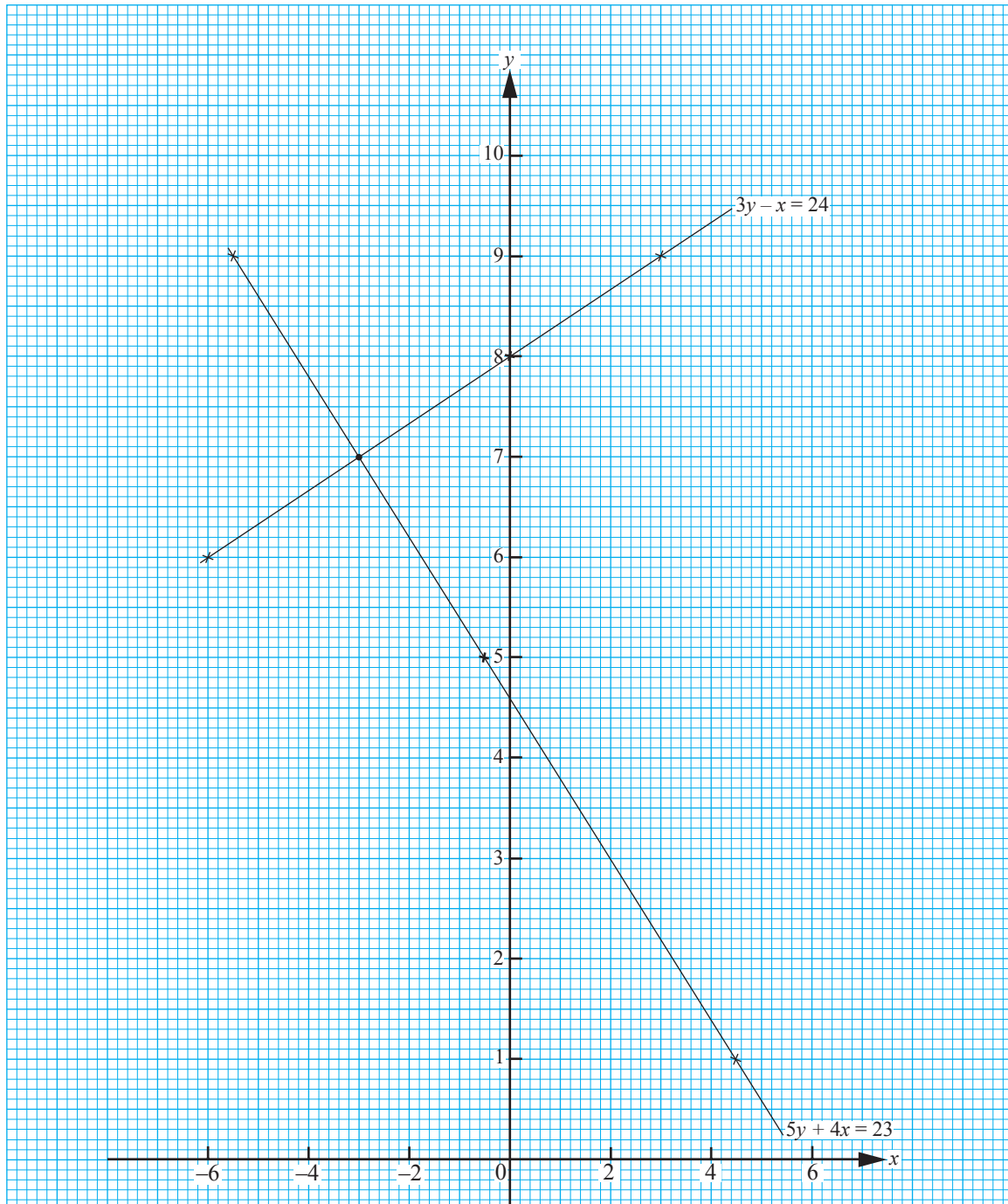
(b) The solution is  $x = 2, y = 4$ .

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  $x = -3, y = 7$ .