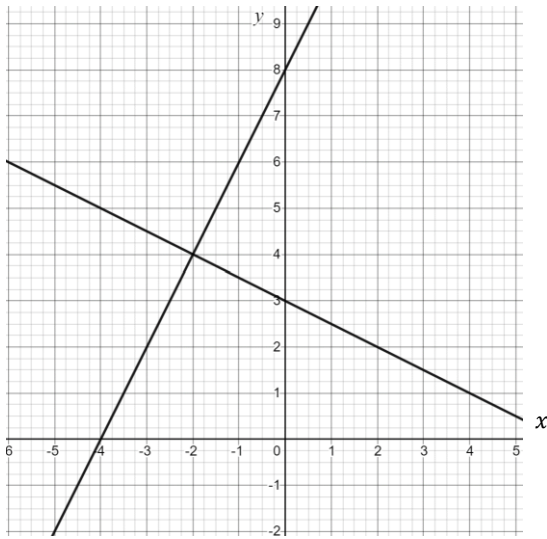


Solving Simultaneous Equations Graphically Exam Practice



Q1. The graphs of $2y + x = 6$ and $y - 2x = 8$ are drawn below:



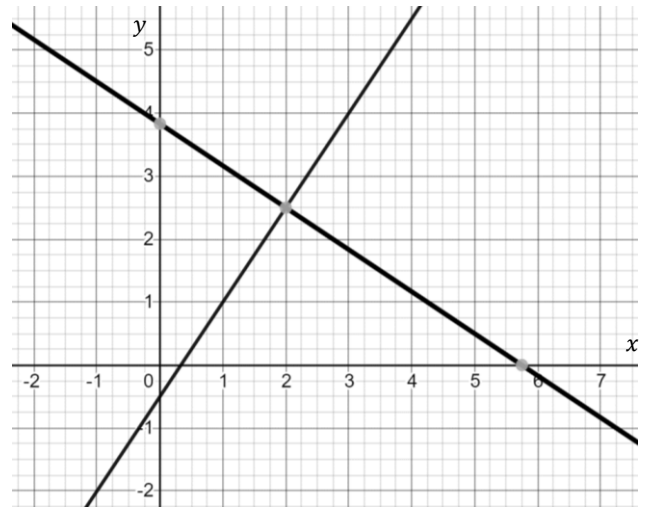
Use the graphs to solve the following pair of equations:

$$2y + x = 6$$

$$y - 2x = 8$$

[2 marks]

Q2. The graphs of $3x - 2y = 1$ and $4x + 6y = 23$ are drawn below:



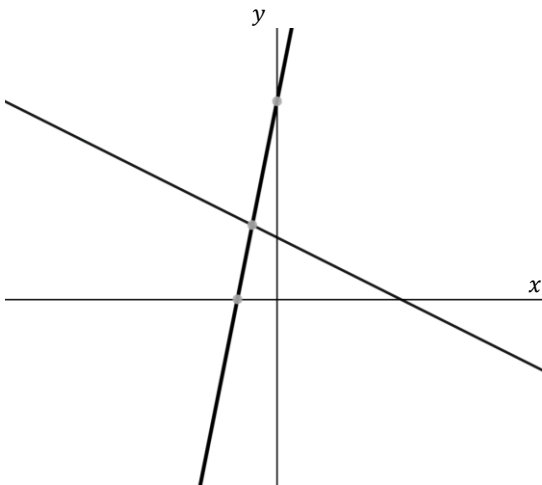
Use the graphs to solve the following pair of equations:

$$3x - 2y = 1$$

$$4x + 6y = 23$$

[2 marks]

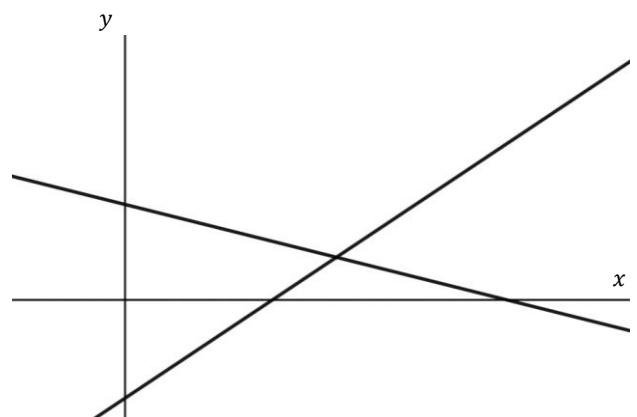
Q3. A sketch of the graphs of $y - 5x = 4$ and $4x + 8y = 10$ is shown below:



Find the exact co-ordinates of the point of intersection.

[4 marks]

Q4. A sketch of the graphs of $6x - 9y = 14$ and $2x + 8y = 12$ is shown below:

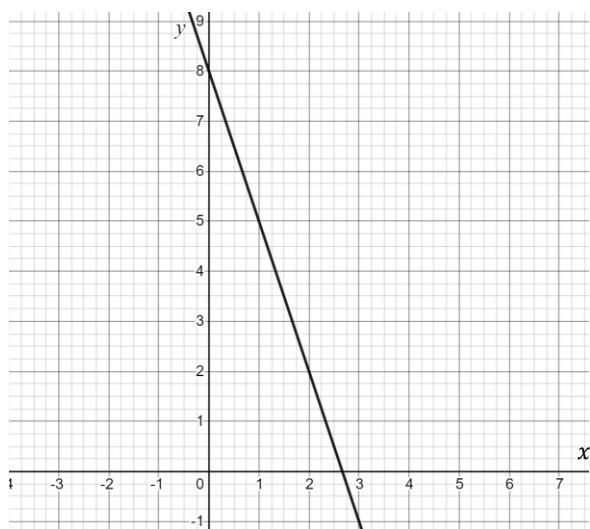


Find the exact co-ordinates of the point of intersection.

[4 marks]



Q5. The graph of $y + 3x = 8$ is drawn below:



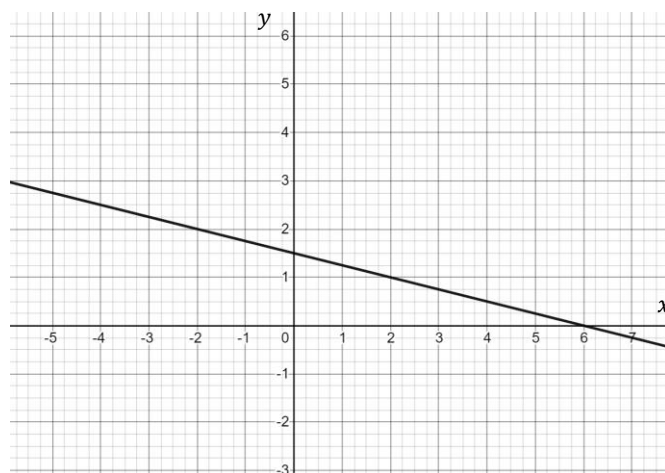
By drawing a suitable line on the grid solve following pair of equations:

$$y - 2x = 3$$

$$y + 3x = 8$$

[3 marks]

Q6. The graph of $x + 4y = 6$ and is drawn below:



By drawing a suitable line on the grid solve following pair of equations:

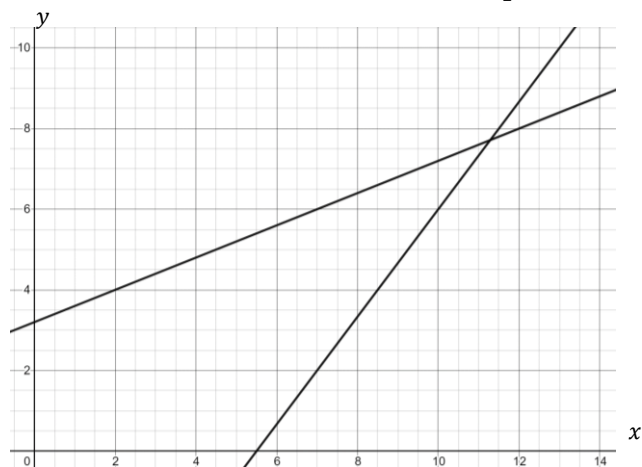
$$2y - 3x = 10$$

$$x + 4y = 6$$

[3 marks]

Q7.(i) Using the grid below, estimate the solution of the equations $4x - 3y = 22$ and $5y - 2x = 16$

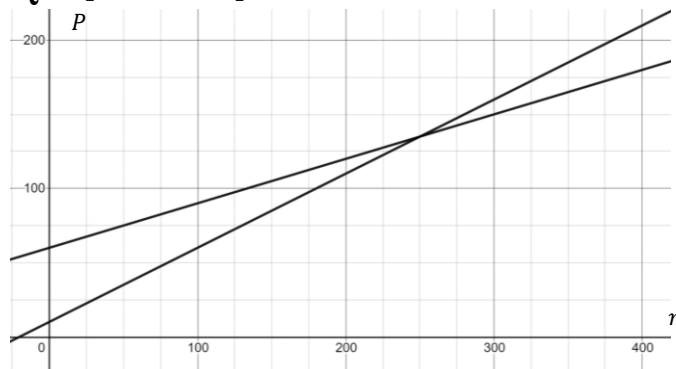
[2 marks]



(ii) How many solutions would the following set of equations have:
 $4x - 3y = 22$, $5y - 2x = 16$, $y = 10$

[2 marks]

Q8. [3 marks]



In a firm, the profit P (£1000's), from the number n of items sold is modelled by 2 staff. One claims the model should be $P = 0.5n + 20$, the other says it should be $P = 0.35n + 60$. The boss will award a staff pay-rise if the two models agree on a profit which exceeds £125,000.

Decide if there will be a pay-rise.