SIMULTANEOUS EQUATIONS (GRAPHICALLY)

Answer all of these questions. Remember to show your working out in all questions.

MAIN QUESTIONS

1. $y = 2x + 1$ and $y = -x + 4$
2. $y = 3x - 2$ and $y = x + 2$
3. $y = -2x + 3$ and $y = x - 1$
4. $y = 4x - 1$ and $y = -x + 4$
5. $y = -3x + 2$ and $y = 2x - 3$
6. $y = x + 3$ and $y = -2x + 1$
7. $y = 5x - 4$ and $y = -2x + 3$
8. $y = -4x + 5$ and $y = 3x - 2$
9. $y = 2x - 5$ and $y = -3x + 5$
10. $y = x - 4$ and $y = -x + 2$

MASTER QUESTIONS

M1. Two lines intersect at point (2,3). One has gradient 2, the other has gradient -1. Find their equations.

M2. A triangle's vertices are at (0,0), (4,0), and the intersection of $y = x + 1$ and $y = -2x + 7$. Find the area.

M3. The sum of two numbers is 8 and their difference is 2. Represent this as simultaneous equations and solve.

M4. A shop sells pens for £2 and pencils for £1. A customer buys 5 items and pays £8. How many of each did they buy?

M5. The lines $y = 3x - 2$ and $y = mx + 4$ intersect at $x = 2$. Find the value of m.