

Mathematics

# Comparing algebraic and graphical methods for solving simultaneous equations

## Independent Task

Ms Jones



## Try this

Solve the following simultaneous equations using an algebraic method.

$$y - x = -5$$

$$2x + 3y = 5$$



# Independent task

Solve the following simultaneous equations algebraically and graphically:

1.  $y = 4x - 1$  and  $y = -x + 4$
2.  $x + y = 10$  and  $y = 5x - 2$
3.  $y - 2x = 1$  and  $y + 4x = 5$
4. Why do  $y = -4x + 5$  and  $y + 4x = 12$  have no solution when solved simultaneously?



# Explore

What could the coefficients of  $x$  and  $y$  be in each equation to make the point of intersection  $(3,-2)$ ?

$$\square x + \square y = 15$$

$$\square x + \square y = 3$$

