Mathematics

Solving Linear Simultaneous Equations Graphically
Solving inequalities graphically

Independent Task

Ms Jones

Try this

For each inequality, write 5 coordinates that satisfy it

$y < 2$

$x \geq 3$

$x + y > 5$

$y < 2$: e.g. (4, -1), (190, 1), (120, 1.5)

$x \geq 3$: e.g. (3, 4), (3.5, 129), (12, 12)

$x + y > 5$: e.g. (2, 4), (2.5, 3), (-1, 7)

Independent task

$$x \geq -1 \qquad x + y > 2 \qquad y \leq 6 \qquad y - x < 1$$

1. Which of the inequalities above satisfy the following coordinates?

a) (-2, 4)

b) (-6, -7)

c) (5.5, 2)

d) (2, 5.5)

$$(3, -2) \qquad (-2, -5) \qquad (-2.4, 7.4) \qquad (3.5, 2)$$

2. Which of the coordinates above are satisfied by the following inequalities?

a) x+y≥1

b) x<-2

c) $x \leq 3$

d) $y > -2$

Explore

How many different coordinates can you make using the numbers below

$$-5 \quad 0 \quad 4 \quad 12$$

$$(\boxed{},\boxed{})$$

For each coordinate you've made can you write three inequalities that it satisfies. Try and think of unusual examples.