

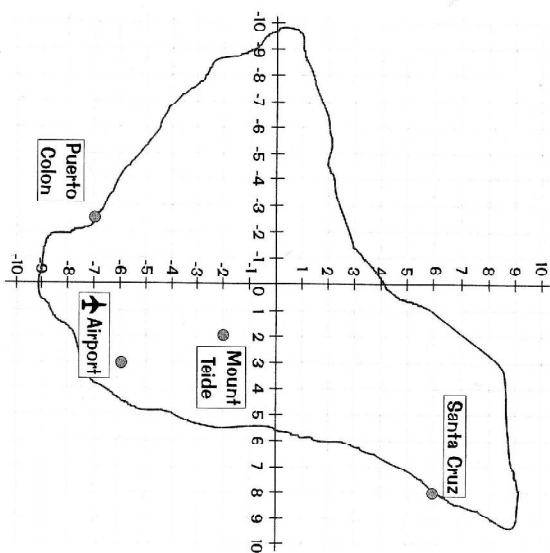
X and Y Coordinates



Remember — 1) x comes before y

2) x goes a-cross (get it) the page. (Ah, the old ones are the best...)

Q3 The map shows the island of Tenerife where the sun never stops shining...



a) Use the map to write down the coordinates of the following:

Airport (.... ,)

Mount Teide (.... ,)

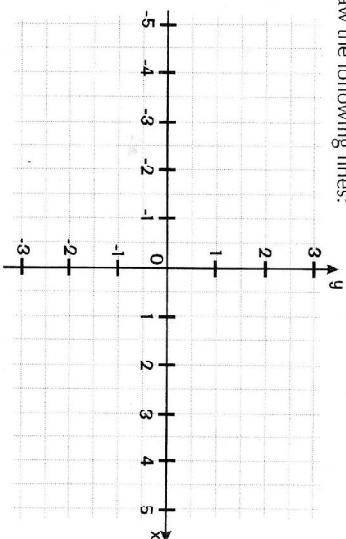
Santa Cruz (.... ,)

Puerto Colon (.... ,)

- b)** Use the coordinates given to mark the following holiday destinations on the map.
Las Americas (-4, -6), El Medano (4, -4), Icod (-6, 2), Laguna (3, 7), Taganana (9, 9)
- c)** The cable car takes you to the top of Mount Teide. It starts at (3, 1) and ends at (2, -2). Draw the cable car route on the map.

Q4 On the graph paper below, draw the following lines:

- a)** $y = -2$
b) $x = -4$
c) $y = 1.5$
d) $x = 2.5$



SECTION SIX — GRAPHS

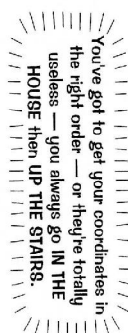
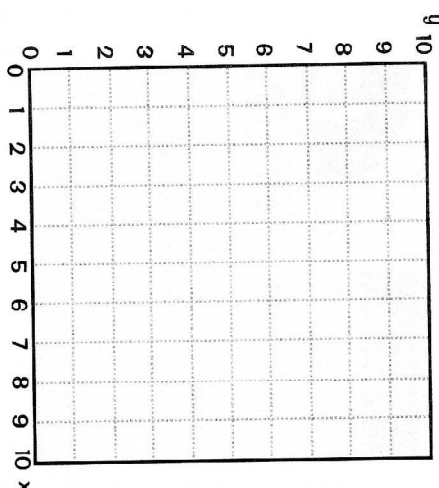
X and Y Coordinates

Q1 On the grid plot the following points. Label the points A, B, C, etc.

Join the points with straight lines as you plot them.

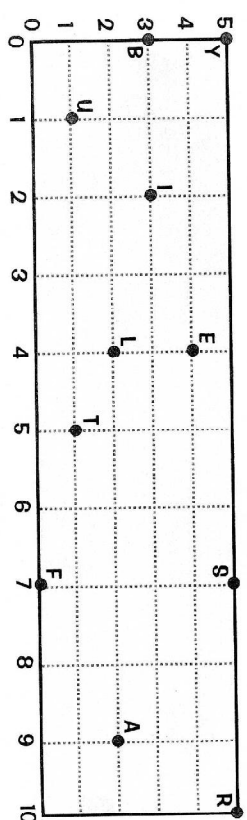
A(0, 8) B(4, 6) C(4.5, 6.5) D(5, 6) E(9, 8) F(8, 5.5) G(5, 5) H(8, 4) I(7.5, 2) J(6, 2)
K(5, 4) L(4.5, 3.5) M(4, 4) N(3, 2) O(1.5, 2) P(1, 4) Q(4, 5) R(1, 5.5) S(0, 8).

You should see the outline of an insect. What is it?



Q2 Write down the letter which is by each of the following points.

The sentence it spells is the answer to question one.



- | | | | | | | |
|--------|--------|--------|---------|--------|--------|--------|
| (2, 3) | (5, 1) | (2, 3) | (7, 5) | (9, 2) | (0, 3) | (1, 1) |
| | | | | | | |
| (5, 1) | (5, 1) | (4, 4) | (10, 5) | (7, 0) | (4, 2) | (0, 5) |
| | | | | | | |

Midpoint of a Line Segment

Q1 Find the midpoint of the line segments AB, where A and B have coordinates:

- a) A(2,3) B(4,5) d) A(3,15) B(13,3)
- b) A(1,8) B(9,2) e) A(6,6) B(0,0)
- c) A(0,11) B(12,11) f) A(15,9) B(3,3)

Your answers should be coordinates too.



Q2 Find the midpoints of each of these line segments:

- a) Line segment PQ, where P has coordinates (1,5) and Q has coordinates (5,6).
- b) Line segment AB, where A has coordinates (3,3) and B has coordinates (4,0).
- c) Line segment RS, where R has coordinates (4,5) and S has coordinates (0,0).
- d) Line segment PQ, where P has coordinates (1,3) and Q has coordinates (3,1).
- e) Line segment GH, where G has coordinates (0,0) and H has coordinates (-6,-7).

Q3

A college wants to install drinking water fountains at convenient locations around the college site (shown below on the coordinate map). The fountains are to be placed at points exactly half way between the main buildings.

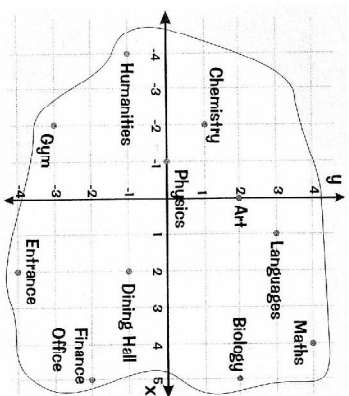
a) Where should they be placed between the following buildings? Give the coordinates.

Art and Biology:

Gym and Humanities:

Languages and Maths:

b) What building is halfway between Physics and the Finance Office? Give the name and coordinates.



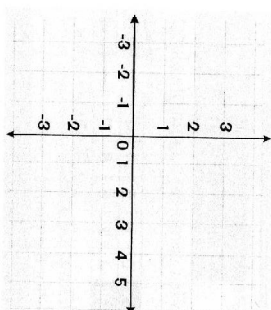
Straight-Line Graphs



Keep learning these straight lines till they start coming out of your ears — you've got to know about the vertical/horizontal lines and the sloping ones through the origin.

Q1 On the diagram opposite:

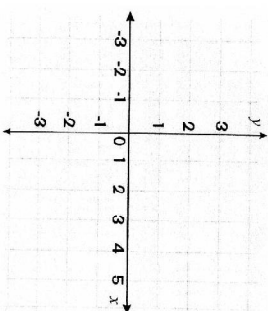
- a) Label the x axis.
- b) Label the y axis.
- c) Draw and label the line $x = 3$.
- d) Draw and label the line $y = 2$.



Q2

On the diagram:

- a) Label the line $x = 0$.
- b) Label the line $y = 0$.
- c) Draw and label the line $y = x$.
- d) Draw and label the line $y = -x$.
- e) Draw and label the line $x = -3$.
- f) Draw and label the line $y = -2$.



Q3 Which letters represent the following lines:

- a) $x = y^2$
- b) $x = 5^2$
- c) $y = -x^2$
- d) $x = 0^2$
- e) $y = -7^2$

