

TARGET To describe positions on the full co-ordinate grid.

The position of a point on a grid is given by its x and y co-ordinates.

The x co-ordinate always comes first.

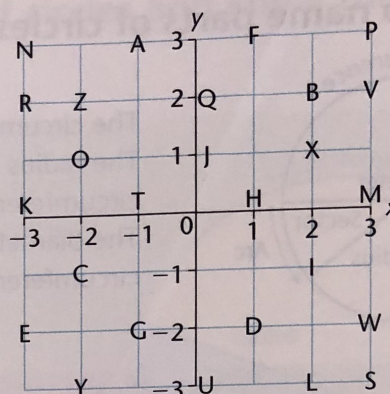
Examples

Point O is $(-2, 1)$

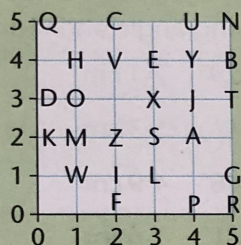
Point X is $(2, 1)$

Point C is $(-2, -1)$

Point I is $(2, -1)$



A



Use the above grid.

Which letter is at:

- | | |
|------------|------------|
| 1 $(3, 4)$ | 5 $(4, 3)$ |
| 2 $(5, 5)$ | 6 $(3, 1)$ |
| 3 $(0, 3)$ | 7 $(2, 2)$ |
| 4 $(1, 1)$ | 8 $(5, 0)$ |

Give the position of:

- | | |
|------|-------|
| 9 G | 13 V |
| 10 C | 14 P |
| 11 O | 15 L |
| 12 K | 16 Q. |

Use the grid to write:

- 17 your name
- 18 your school
- 19 your favourite colour
- 20 your favourite meal.

B

Use the above grid.

Which letter is at:

- | | |
|--------------|---------------|
| 1 $(3, 2)$ | 5 $(-2, 2)$ |
| 2 $(-3, -2)$ | 6 $(1, -2)$ |
| 3 $(0, 1)$ | 7 $(-1, 0)$ |
| 4 $(2, -3)$ | 8 $(-2, -1)?$ |

Give the position of:

- | | |
|------|-------|
| 9 W | 13 K |
| 10 Y | 14 P |
| 11 Q | 15 U |
| 12 G | 16 C. |

Each set of co-ordinates spells out the name of a European capital city, but one letter has been moved. Find the city.

- | | |
|--------------|--------------|
| 17 $(3, -3)$ | 19 $(-2, 1)$ |
| $(-2, 1)$ | $(3, 0)$ |
| $(2, -3)$ | $(-3, -2)$ |
| $(-2, 1)$ | $(-3, 2)$ |
| 18 $(-1, 0)$ | 20 $(2, -1)$ |
| $(1, 0)$ | $(3, -3)$ |
| $(-3, -2)$ | $(-2, 1)$ |
| $(-3, 3)$ | $(1, 3)$ |
| $(-1, 3)$ | $(-1, 3)$ |
| $(3, -3)$ | |

- 21 Write in co-ordinates the countries of which these cities are the capitals.

C

Use the above grid. Find the European capital cities.

- | | |
|-------------|-------------|
| 1 $(2, -3)$ | 3 $(3, -3)$ |
| $(0, 1)$ | $(-3, 0)$ |
| $(0, -3)$ | $(-2, 1)$ |
| $(2, 2)$ | $(3, 3)$ |
| $(2, -3)$ | $(0, 1)$ |
| $(0, 1)$ | $(-3, -2)$ |
| $(-1, 3)$ | |
| $(-3, 3)$ | 4 $(-3, 2)$ |
| $(-1, 3)$ | $(-3, -2)$ |
| | $(-2, -3)$ |
| 2 $(3, 2)$ | $(-3, 0)$ |
| $(-1, 3)$ | $(0, 1)$ |
| $(1, -2)$ | $(-1, 3)$ |
| $(0, -3)$ | $(3, 2)$ |
| $(-2, 2)$ | $(2, -1)$ |
| | $(-3, 0)$ |

- 5 Write in co-ordinates the countries of which these cities are the capitals.
- 6 A $(-3, 1)$, B $(1, 3)$ and C $(3, -1)$ are three vertices of square ABCD. Draw a grid like the one above, plot the points and complete the square.
- 7 Find the midpoint of line:

a) AB	c) CD	e) BD
b) BC	d) AD	f) AC.