Graham's grid

31A

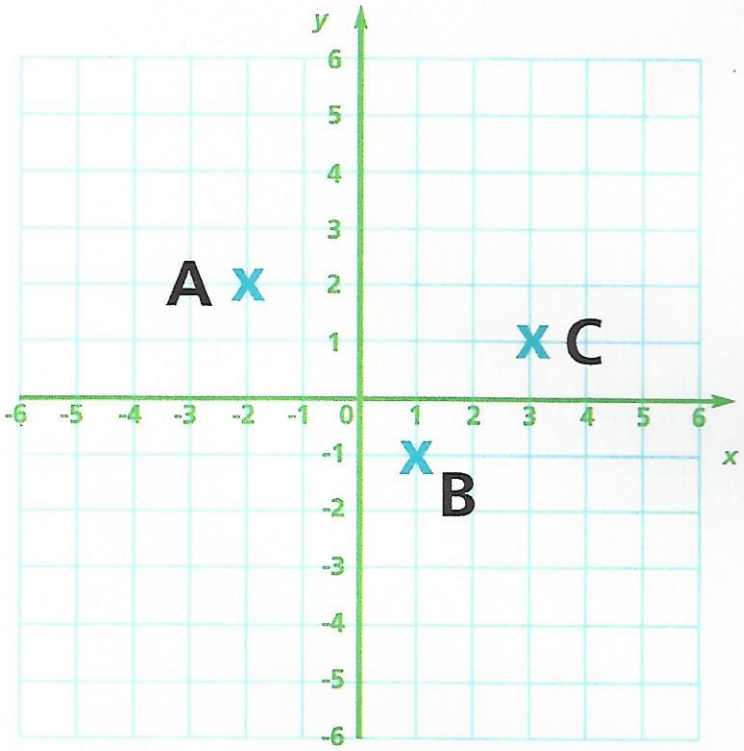
Graham was feeling very pleased with himself. He had got full marks for his maths homework, which was all about points on a coordinate grid. He showed the grid to his Dad, and asked him the first five questions.

Dad got those answers right.

'Okay,' said Graham. 'Here's question 6: A, B and C are three vertices of a pentagon that has three right angles. What are the coordinates of the other two vertices?'

Dad frowned. 'That is difficult.' He thought for a bit. 'What about one vertex at minus one, three... and the other at two, four?'

'Well,' said Graham, 'let's see...'



Graham's grid

Comprehension questions

31B

1. A, B and C are three vertices of a rectangle. What are the coordinates of the fourth vertex?
   a. (0, 4)
   b. (0, 5)
   c. (–1, –3)

2. A, B and C are three vertices of a parallelogram. What are the coordinates of the fourth vertex?
   a. (–4, 2)
   b. (–4, 1)
   c. (–4, 0)

3. A, B and C are three vertices of a triangle. What type of triangle is it?
   a. isosceles
   b. right-angled
   c. scalene

4. Points T and W are on a line parallel to line BC. Where could T and W be?
   a. (–1, 1), (–2, 1)
   b. (–2, –1), (1, 2)
   c. (0, 0), (0, 1)

5. Points Y and Z are on a line perpendicular to line AB. Where could Y and Z be?
   a. (–2, 0), (1, 3)
   b. (–2, 1), (2, 1)
   c. (–2, 2), (–3, 5)

6. Was Dad's answer to question 6 correct?
   a. Yes, they are at (–1, 3) and (2, 4).
   b. No, they are at (0, 4) and (3, 4).
   c. No, they are at (0, 3) and (2, 2).