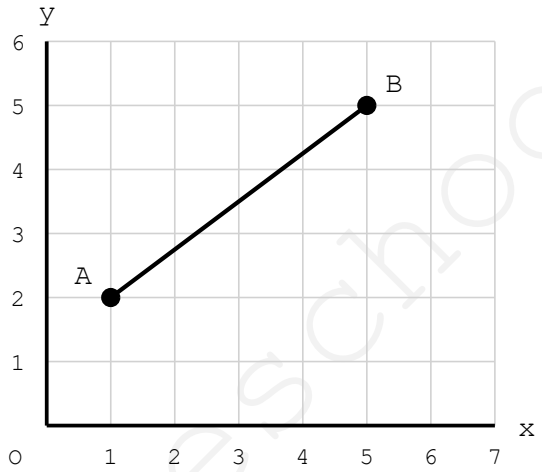
Coordinates & Graphs: Hard Practice Paper 1

Q1. M is the midpoint of AB. A is (−3, −2) and M is (1, 2). What are the coordinates of B?

A. (4, 5) B. (5, 4) C. (6, 6) D. (2, 3) E. (5, 6)

Q2. How long is the straight line joining (1, 2) and (5, 5)?



A. 3 units B. 4 units C. 5 units D. 7 units E. 12 units

Q3. What are the coordinates of the midpoint of the line joining (1, 2) and (4, 7)?

A. (2, 4)

B. (2.5, 4)

C. (3, 5)

D. (2.5, 4.5)

E. (2, 4.5)

Q4. A square has its centre at (4, 4) and one corner at (4, 7). Where is the corner opposite that one?

A. (1, 4) B. (4, 1) C. (7, 4) D. (4, 10) E. (1, 1)

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Q5. Three corners of a parallelogram are (1, 1), (5, 1) and (2, 4). If the fourth corner may be placed anywhere that makes a parallelogram, how many different positions are there for it?

A. 1 B. 2 C. 3 D. 4 E. 6

Q6. Which point on the x-axis is the same distance from (−1, 0) as it is from (7, 0)?

A. (2, 0) B. (3, 0) C. (4, 0) D. (6, 0) E. (8, 0)

Q7. The line joining (2, 3) and (10, 9) is drawn. A point P is the midpoint of that line, and Q is the midpoint of the part from (2, 3) to P. What are the coordinates of Q?

A. (4, 4.5) B. (6, 6) C. (4, 5) D. (5, 4.5) E. (4.5, 4)

Q8. A rectangle has two opposite corners at (−2, 1) and (6, 7), and its sides are parallel to the axes. What are the coordinates of the other two corners?

A. (−2, 7) and (6, 1)

B. (2, 4) and (4, 2)

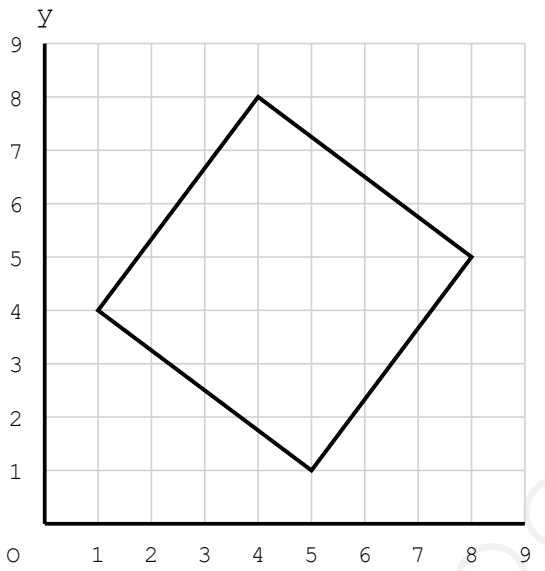
C. (−2, 6) and (1, 7)

D. (6, −2) and (7, 1)

E. (−2, −1) and (6, −7)

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Q9. What is the perimeter of this square, in units?



A. 12 B. 16 C. 18 D. 20 E. 24

Q10. A is (−6, 3) and B is (2, −5). What are the coordinates of the midpoint of AB?

A. (−4, −2) B. (2, 1) C. (−2, 1) D. (4, −1) E. (−2, −1)

Q11. Two vertices of an isosceles triangle are (0, 0) and (6, 0). Which third vertex would make the two sloping sides equal in length?

A. (2, 4) B. (3, 4) C. (4, 3) D. (6, 4) E. (0, 4)

Q12. The points (2, 5), (6, 5) and (6, 1) are three corners of a square. A fourth point is added at (2, 2). Which statement is true?

A. The four points make a square

B. The four points make a rectangle

C. The point should have been (2, 1)

D. The point should have been (1, 2)

E. The four points make a parallelogram

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Q13. A point is 5 units from the origin and lies on the x-axis. Where can it be?

A. (5, 0) only

B. (0, 5) only

C. (0, 5) or (0, −5)

D. (5, 5) or (−5, −5)

E. (5, 0) or (−5, 0)

Q14. A straight line joins (0, 0) to (12, 8). Which of these points lies exactly on it?

A. (4, 3) B. (6, 5) C. (8, 5) D. (9, 6) E. (10, 7)

Q15. The centre of a circle is (4, 5) and one end of a diameter is (1, 5). Where is the other end?

A. (7, 5) B. (4, 8) C. (8, 5) D. (4, 2) E. (6, 5)

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