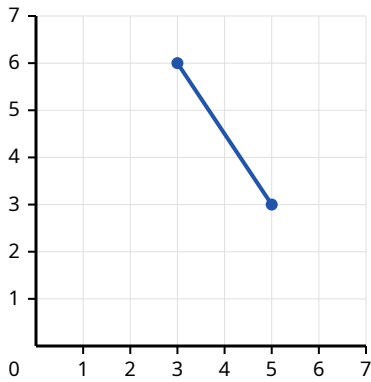




Line Graphs - set samples - paper 1

Study the line on the coordinate grid and answer the question.

1.

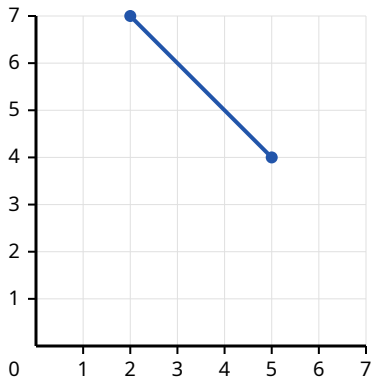


A line is drawn from (3, 6) to (5, 3).

Which option gives a line that is parallel to the line shown but does not lie on the same straight line?

- A (5, 3) and (3, 6)
- B (4, 4) and (7, 3)
- C (7, 1) and (3, 5)
- D (3, 4) and (5, 1)
- E (5, 4) and (3, 5)

2.

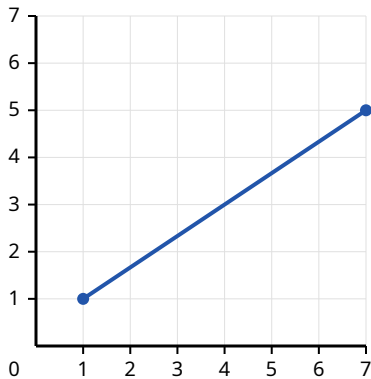


A line is drawn from (2, 7) to (5, 4).

Which option shows a different line segment with the same gradient as the line in the diagram?

- A (2, 7) and (5, 4)
- B (1, 5) and (4, 2)
- C (7, 2) and (3, 4)
- D (6, 4) and (1, 5)
- E (1, 2) and (7, 4)

3.



A line is drawn from (1, 1) to (7, 5).

Which option shows a different line segment with the same gradient as the line in the diagram?

- A (1, 1) and (6, 4)
- B (1, 3) and (7, 7)
- C (1, 1) and (7, 5)
- D (1, 6) and (6, 3)
- E (2, 5) and (6, 3)



Line Graphs - set samples - Answers

1. Original line: (3, 6) to (5, 3)

$$\text{Slope} = \frac{(3-6)}{(5-3)} = \frac{-3}{2}$$

Check options:

A: (5, 3) and (3, 6) → (Same line)

$$\text{B: (4, 4) and (7, 3) → Slope} = \frac{(3-4)}{(7-4)} = \frac{-1}{3}$$

$$\text{C: (7, 1) and (3, 5) → Slope} = \frac{(5-1)}{(3-7)} = -1$$

$$\text{D: (3, 4) and (5, 1) → Slope} = \frac{(1-4)}{(5-3)} = \frac{-3}{2} \checkmark$$

$$\text{E: (5, 4) and (3, 5) → Slope} = \frac{(5-4)}{(3-5)} = \frac{-1}{2}$$

Answer: D

2. Original line: (2, 7) to (5, 4)

$$\text{Slope} = \frac{(4-7)}{(5-2)} = \frac{-3}{3} = -1$$

Check options:

A: (2, 7) and (5, 4) → (Same line)

$$\text{B: (1, 5) and (4, 2) → Slope} = \frac{(2-5)}{(4-1)} = -1 \checkmark$$

$$\text{C: (7, 2) and (3, 4) → Slope} = \frac{(4-2)}{(3-7)} = \frac{-1}{2}$$

$$\text{D: (6, 4) and (1, 5) → Slope} = \frac{(5-4)}{(1-6)} = \frac{-1}{5}$$

$$\text{E: (1, 2) and (7, 4) → Slope} = \frac{(4-2)}{(7-1)} = \frac{1}{3}$$

Answer: B

3. Original line: (1, 1) to (7, 5)

$$\text{Slope} = \frac{(5-1)}{(7-1)} = \frac{4}{6} = \frac{2}{3}$$

Check options:

$$\text{A: (1, 1) and (6, 4) → Slope} = \frac{(4-1)}{(6-1)} = \frac{3}{5}$$

$$\text{B: (1, 3) and (7, 7) → Slope} = \frac{(7-3)}{(7-1)} = \frac{2}{3} \checkmark$$

C: (1, 1) and (7, 5) → (Same line)

$$\text{D: (1, 6) and (6, 3) → Slope} = \frac{(3-6)}{(6-1)} = \frac{-3}{5}$$

$$\text{E: (2, 5) and (6, 3) → Slope} = \frac{(3-5)}{(6-2)} = \frac{-1}{2}$$

Answer: B