

Push Tasks - Coordinates



Explain what a gradient value means, and reverse a midpoint or reflection.

1. A line has gradient 2. Explain what that means about the line.

2. Explain why a vertical line has an undefined gradient.

3. The midpoint of a segment is (3,4) and one endpoint is (1,2). Find the other endpoint.

4. A point (x, y) is reflected in the x-axis, then in the y-axis. What are the final coordinates, in terms of x and y ?

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Reason about gradient, perpendicularity, and shape properties using coordinates.

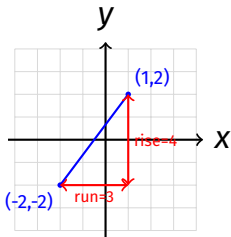
5. A line rises 3 units for every 6 units it runs. What is its gradient?

6. Prove that the triangle with vertices $(1,1)$, $(4,1)$, $(4,3)$ is right-angled.

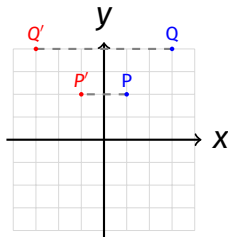
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7. Find the gradient of AB. What gradient would a line perpendicular to AB have?



8. Describe the transformation shown.

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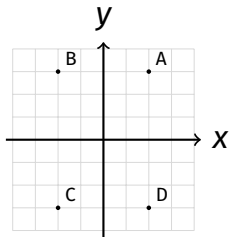
9. A shape is translated using the rule $(x, y) \rightarrow (x + 3, y - 2)$. Where does the point (1,5) end up?

10. A line has gradient -2 . What does the negative sign tell you about the line?

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11. A,B,C,D form a rectangle. Find its perimeter.

12. What is special about every point on the line $x + y = 0$?