Year 9 Mathematics Learning Journey: Unit 1 - Straight Line Graphs

Step 1: Lines parallel to the axes, y = x and y = -x

Which axis is y = 4 parallel to? How do you know?

Step 2: Using table of values

Complete a table of values from y = 1 – 5x

Step 3: Compare gradients

How can you tell from a graph if a line has a positive or negative gradient?

Step 4: Compare intercepts

A straight line has a gradient of -4. It intercepts the y-axis at the point (0, -2.5). What is the equation of the line?

Step 5: Understand and use y = mx + c

What does it tell us about two lines if they have the same gradient?

Step 6 (H): Write an equation in the form y = mx + c

Write x + 15 = 3y in the form y = mx + c

Step 7: Find the equation of a line from a graph

How do you work out the gradient of a line? How can you then find its equation?

Step 8: Interpret gradient and intercepts of real-life graphs

What do the gradient and y-intercept represent?

Step 9(H): Model real-life graphs involving inverse proportion

Why does the graph never meet the axis?

Step 10(H): Explore perpendicular lines

Line A is given by the equation y = 3x – 15. Line B is given by the equation 15y = 17 – 5x. Are lines A and B perpendicular? Explain.

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