Drawing Linear and Quadratic Graphs: Plot, Compare, and Explain

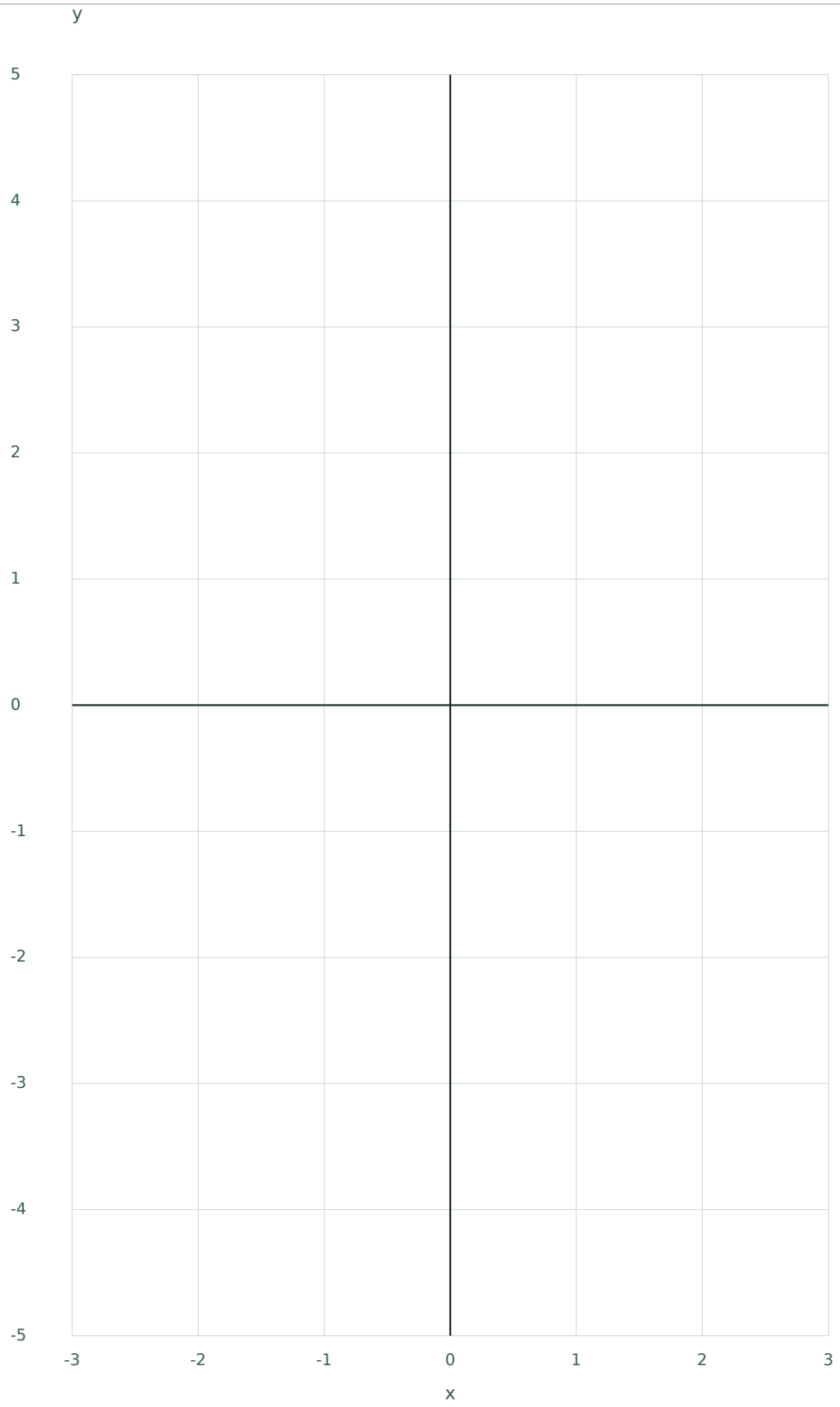
Worksheet Part A: value tables with blank rows

Use x = -2, -1, 0, 1, 2 for both functions. Record working and check two rows by substitution.

x	y = x + 2	working	y = x^2 - 4
-2			
-1			
0			
1			
2			

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Worksheet Part B: shared blank coordinate grid



Student plotting space for y = x + 2 and y = x^2 - 4.

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Worksheet Part B: comparison questions

Answer in checkable sentences with coordinates and arithmetic.

Linear y-intercept	
Quadratic y-intercept	
Visible x-intercepts (coordinates)	
Quadratic symmetry line and substitution check	
Two comparison sentences	

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Original tasks 1, 2, 3 / blank responses

Task 1

Plot y = 3x - 1 and y = x^2 - 1 on shared axes for x = -1, 0, 1, 2, 3. State both y-intercepts and one x-intercept of each graph.

Task 2

Plot y = -x + 4 and y = x^2 - 2x on shared axes for x = -1, 0, 1, 2, 3. Compare the shape and state whether the quadratic has a line of symmetry, with a substitution check.

Task 3

Plot y = 0.5x + 1 and y = x^2 - 3 on shared axes for x = -2, -1, 0, 1, 2. State the y-intercepts and describe where each graph crosses the x-axis using the plotted points.

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Original tasks 4 / blank responses

Task 4

Plot y = 2x + 3 and y = x^2 + 2x - 3 on shared axes for x = -3, -2, -1, 0, 1. Compare the number of x-intercepts and check the quadratic symmetry line by substitution.