Drawing Curved Graphs from Value Tables: A Practical Guide

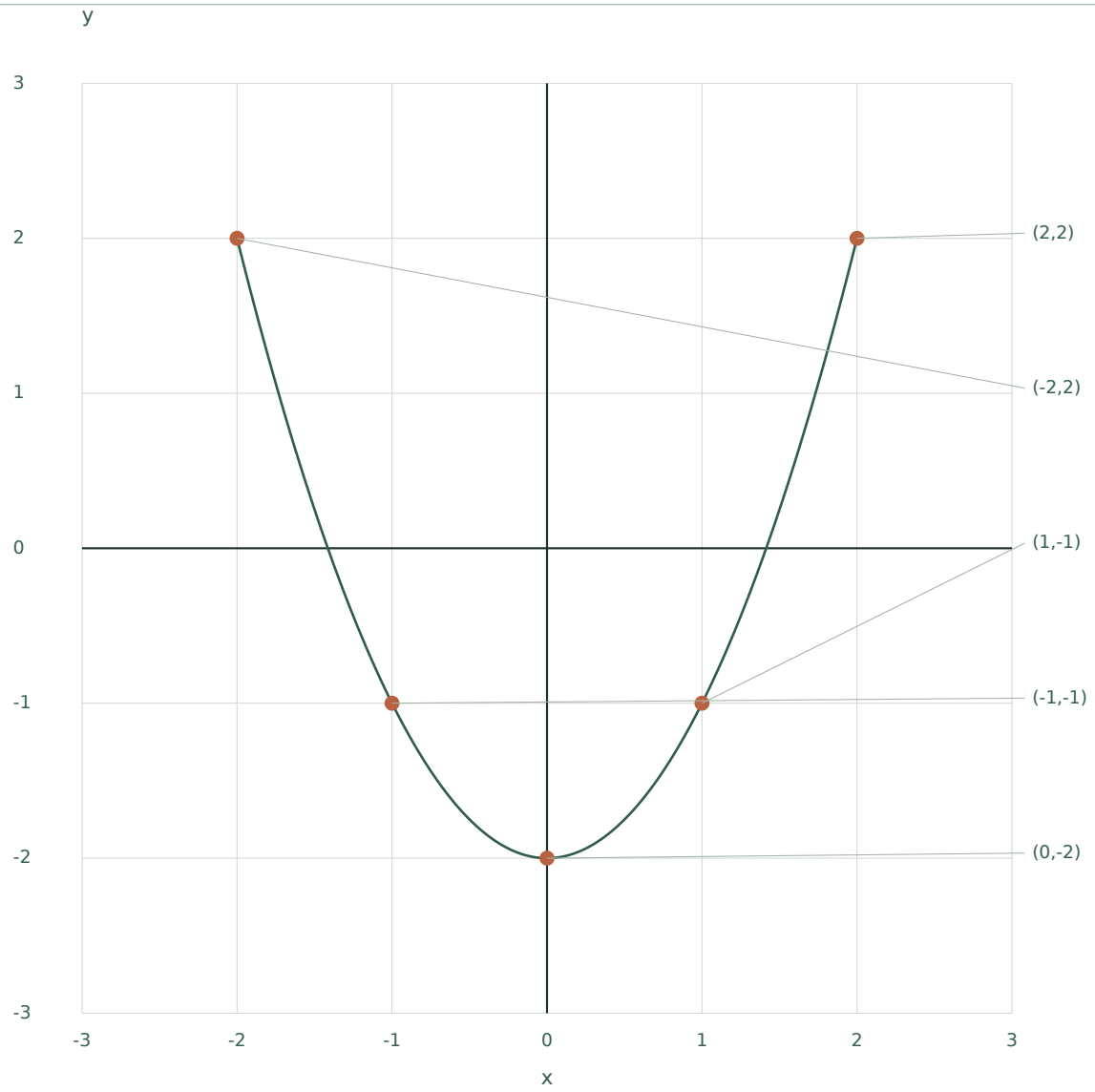
Original worked example / unchanged complete key

Prompt: Plot the curve y = x^2 - 2 for x from -2 to 2 using a value table. Use a grid where each square represents 1 unit on both axes.

Answer: Value table: x = -2 gives y = 2; x = -1 gives y = -1; x = 0 gives y = -2; x = 1 gives y = -1; x = 2 gives y = 2. Plot the points (-2,2), (-1,-1), (0,-2), (1,-1), (2,2) and join them with a smooth U-shaped curve opening upward. The lowest point is at (0,-2). Check: x = 0.5 gives y = 0.25 - 2 = -1.75, which should lie on the curve between x = 0 and x = 1.

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Worked example: y = x^2 - 2 on a 1-unit grid



Reference plot for the worked example; each square is 1 unit on both axes. Coordinate labels sit outside the plot; thin grey leaders are annotations, not function curves.