7 Differential equations and slope fields – Part 1 — Answers

Answers

Work through these after you have tried the questions yourself.

2.1 it involves a derivative – it describes a rate of change rather than giving the value directly.
2.2 finding the function whose derivative matches the equation.
2.3 differentiating $y = x^2$ gives $\frac{dy}{dx} = 2x$, which matches, so it is a solution.
2.4 a small line at many points showing the slope of the solution there.
2.5 solutions can differ by a constant (a whole family), all with the same derivative.