

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.