

4 Related rates and linear approximation – Part 2 — Answers

Answers

Work through these after you have tried the questions yourself.

2.1 two quantities that change together over time, where knowing one rate lets you find the other.

2.2 $\frac{dA}{dt} = 2(4)(3) = 24 \text{ cm}^2/\text{s}.$

2.3 the tangent line at a known point.

2.4 $f(2.1) \approx 4 + 4(0.1) = 4.4$ (true value 4.41).

2.5 far from the point of contact, where the curve bends away from the tangent.