

3rd May

Corbettmaths

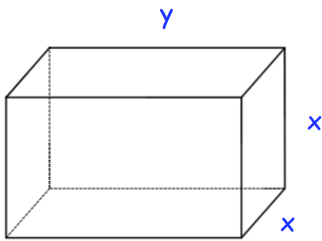
Simplify

$$\frac{(3x^4y)^4}{9x^7y^6}$$

$$g(x) = x^2 + x - 2 \quad \text{for } -1 \leq x \leq 4$$

Work out the range of $g(x)$

Shown below is a metal box in the shape of a cuboid.

The volume of the box is 80cm^3

Show that $y = \frac{80}{x^2}$

Show that the area of metal to make the box is given by

$$A = 2x^2 + \frac{320}{x}$$

Use differentiation to find the value of x for which A is a minimum