(ii) the area of the shape. [3]

10 In this question a, b and n are constants.

When $5(2+ax)^n$ is written in ascending powers of x, the first three terms are $640+b^2x+30\,240x^2$.

Find the value of a and the possible values of b. [5]

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11 A cylinder has radius r cm and height h cm.
The total surface area, including the two ends, is $A\,\text{cm}^2$.
The volume of the cylinder is $330\,\text{cm}^3$.

(a) Show that $A = 2\pi r^2 + \frac{660}{r}$. [3]

(b) Given that r can vary, find the value of r that gives a stationary value for A and show that this value is a minimum. [5]

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