

6 In the expansion of $(3 + ax)^n$, where a and n are integers, the coefficient of x^2 is 4860

6 (a) Show that

$$3^n a^2 n (n - 1) = 87480$$

[3 marks]

6 (b) The constant term in the expansion is 729

The coefficient of x in the expansion is negative.

6 (b) (i) Verify that $n = 6$

[1 mark]

6 (b) (ii) Find the value of a

[3 marks]