

Section 2: The binomial expansion

Exercise

- Write down the first eight rows of Pascal's triangle.
- Find the coefficient of x^4 in the following expansions:
 - $(x + 1)^{10}$
 - $(1 - x)^7$
- Find the coefficient of x^3 in the following expansions:
 - $(3x + 2)^5$
 - $(3 - 2x)^6$
- Find the term independent of x in the expansion of $(2x - \frac{5}{x})^6$.
- Find the coefficient of a^2b^5 in the expansion of $(3a - 2b)^7$.
- Expand and simplify $(1 + 2x)^4 - (1 - 2x)^4$.