



1 Expand $(3+2x)^4$
 $16x^4 + 96x^3 + 216x^2 + 216x + 81$

2 What are the first four terms, in ascending powers of x , for the binomial expansion of $(2x-1)^5$
 $-32x^5 + 80x^4 - 80x^3 + 40x^2$

3 Find the coefficient of x^4 in the binomial expansion of $(3+2x)^{10}$
 2 449 440

4 The coefficient of x^3 in the expansion of $(3+4x)^5$ is 5760. Find the value of the constant b
 4

5 When $(1+\frac{1}{x})^n$ is expanded, the coefficient of x^2 is 4. Find the value of n
 6

6 Expand: $(x+2)^4$
 $x^4 + 8x^3 + 24x^2 + 32x + 16$

7 Find the coefficient of x^3 in the binomial expansion of $(4-3x)^6$
 -34 560

8 Find the coefficient of x in the binomial expansion of $(\frac{1}{x}+x)^7$
 16

9 When $(\frac{1}{x^2}+x)^n$ is expanded, the coefficient of x^{10} is -24. Find the value of n
 16

10 Find the coefficient of x^2 in the binomial expansion of $6(3x+4)^5$
 35

11 The coefficient of x^7 in the expansion of $(1+x)^n$ is seven times the coefficient of x in the expansion of $(1+x)^n$. Find n
 8

12 Solve $(1+x)^4 - (1-x)^4 = 0$
 $x^3 + 3x^2 + 3x + 1$
 Expand: $(1+x)^3$
 $x^3 + 3x^2 + 3x + 1$
 20

13 Expand $(1+\sqrt{3})^3 + (1-\sqrt{3})^3$
 16
 567

Binomial Expansion Solution