

BINOMIAL EXPANSION

1. Expand the following.
 - a. $(a + b)^0$
 - b. $(a + b)^1$
 - c. $(a + b)^2$
 - d. $(a + b)^3$
 - e. $(a + b)^4$
 - f. $(a + b)^5$
 - g. $(a+b)^6$
 - h. $(a+b)^7$
 - i. $(a+b)^8$
 - j. $(a+b)^9$
2. Use the pascal triangle to expand these.
 - a. $(a - b)^3$
 - b. $(2x + y)^3$
 - c. $(1 - 2b)^4$
 - d. $(2x + 3y)^4$
 - e. $(x - 3y)^6$
 - f. $(1 + \sqrt{5})^3$
 - g. $(1 - \sqrt{5})^4$
 - h. $(1 + 2\sqrt{3})^4$
 - i. $(2 - 3\sqrt{7})^5$
3. Expand each of the following.
 - a. $(x + 1/2)^3$
 - b. $(y + 1/2 y)^4$
 - c. $(2x - 3)^4$
 - d. $(3x - 1/3 y)^3$
4. Find the terms as asked below.
 - a. Final term of $(2 + 3x)^3$
 - b. The 7th term of $(2 + x^2/2)^{11}$
 - c. The 3rd term of $(a + b)^5$
 - d. The last term of $(2 - 3\sqrt{7})^5$
 - e. The 2nd term of $(2x - 3)^4$
 - f. The 1st term of $(x + 1/2)^3$ and $(y + 1/2 y)^4$
5. Draw a pascal triangle up to $R = 10(R_{10})$.