

# Binomial Expansion

pg 329: 6, 12, 18, 24, 30, 36, 42

6. The coefficient for the expansion of  $(a+b)^n$  are equal to the number in the  $n^{\text{th}}$  row of Pascal's Triangle

12.  $y^8 + 8y^7 + 28y^6 + 56y^5 + 70y^4 + 56y^3 + 28y^2 + 8y + 1$

18.  $4096x^6 + 12,288x^5 + 15,360x^4 + 10,240x^3 + 3,840x^2 + 768x + 64$

24.  $V = x^6 - \frac{3}{2}x^4 + \frac{3}{4}x^2 - \frac{1}{8}$

30. Because the coefficient 2 in  $2y^2$  will affect the terms.

36.  $27x^3 + 216x^2y + 576xy^2 + 512y^3$

42.  $b^{16} - 16b^{14} + 112b^{12} - 448b^{10} + 1,120b^8 - 1,792b^6 + 1792b^4 - 1,024b^2 + 256$