## Answers to Worksheet 43 - Binomial Theorem

1) Combination; 15

2) Permutation; 720

3) Permutation; 40,320

4) Combination; 23,005

5) 
$$81x^4 - 108x^3 + 54x^2 - 12x + 1$$
  
 $9x - 1$  7)  $-280v^8u^6$ 

6)  $32x^5 - 80x^4 + 80x^3 - 40x^2 + 10x - 1$ 

10) 
$$-160b^3a^6$$

8) 810mn<sup>8</sup>

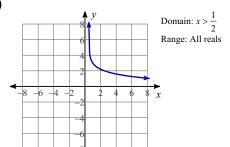
9)  $-14b^{24}a$ 

10) 
$$-160b^3a^6$$

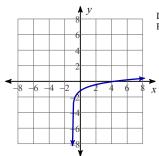
12) 160

13)  $\frac{1}{336} \approx 0.298\%$  14)  $\frac{1}{330} \approx 0.303\%$ 

15)



16)



Domain: x > -1Range: All reals