

(C2-5.3) Name:

Homework Questions 3 – Using Factorials in the Binomial Expansion

1. Write down how many terms there will be in the following expansions

a) $(x + 3)^5$

c) $(x + 3y)^4$

b) $(2 - x)^7$

d) $(3 - 2x)^8$

2. Write down the full expansions of the following, show all your working out

a) $(x + 4)^4$

b) $(2x - 3y)^3$

3. Find the first 3 terms of the expansions, show your working out

a) $(x + 2y)^3$

b) $(3x - y)^5$

4. Find the coefficient of x^2 of the following expansions

a) $(1 - x)^5$

b) $(3 - 4x)^4$

5. The coefficient of x^2 in the expansion below is 1944. Find the value of a
 $(3 + 2ax)^4$