

(C2-5.2) Name:

## Homework Questions 2 – Factorial and Combination Notation

1. Find the values of these factorial notations, show your working out

a)  $7!$

c)  $\frac{5!}{3!}$

b)  $4!$

d)  $\frac{8!}{5!}$

2. Find the values of these combination notations, show your working out

a)  ${}^4C_0$

c)  ${}^5C_3$

b)  ${}^7C_2$

d)  ${}^6C_3$

3. Find the value of these combination notations, show your working out

a)

$$\binom{3}{1}$$

c)

$$\binom{6}{4}$$

b)

$$\binom{7}{5}$$

d)

$$\binom{5}{3}$$

4. Prove that  ${}^6C_4 = \binom{6}{2}$

5. Write using combination notation Line 4 of Pascal's Triangle