

## Math 4721 Quiz 2

*Please answer in a loose sheet*

*Write your ID number at the top of your first page.*

*Total marks: 15*

*Time: 15 minutes*

### 1

A playing die is rolled 9 times. What is the probability that the six will fall:

- a. Exactly 4 times? 2
- b. At least 2 times? 2

### 2

A continuous random variable  $X$  has a uniform distribution from 5 to 20.

- a. Write the equations of its probability density function and cumulative distribution function. 2
- b. Graphically represent the probability density function and cumulative distribution function. 3

### 3

- a. Define expected value of a random variable. 2
- b. What is the difference between discrete and continuous random variables? 2

### 4

If  $X$  is a random integer between 1 and 5, what is the expected value of  $X$ ? 2