

Name _____

Student Number _____

STA107H5S Quiz 3A

Consider the random variable x with probability mass function:

X	-1	0	k	3
p(X)	0.2	0.3	0.1	h

1. (1 mark) Find h.

h=0.4

2. (2 marks) If $E(X)=4$, find K.

k = 30

3. (3 marks) Find $E((X - 2)^2)$

$E((X - 2)^2)=80.6$

4. (4 marks) consider the random variable X with $E(X) = \mu$ and pdf

X	h	μ	k
$p(X)$	0.3	0.4	0.3

Where $h \neq 0$. If this is to be a valid CDF with the given expected value, what must k be (relative to h)?

$h = \mu/2 - k$, or some equivalent statement