Quiz 1

Name: Student ID:

1. Relative Entropy

Let the random variable X have three possible outcomes $\{a, b, c\}$. Consider two distributions on this random variable

Symbol	Probability	$p(x)$	$q(x)$
a		1/6	1/2
b		1/6	1/3
c		2/3	1/6

Calculate $H(p)$, $H(q)$, $D(p \parallel q)$ and $D(q \parallel p)$.