

## Quiz 6

Name:

Student ID:

1. Evaluate the differential entropy for continuous random variables with the following probability density function:

(a).  $f(x) = \lambda \exp(-\lambda x)$ , where  $x \geq 0$ .

(b).  $f(x) = \frac{1}{2} \lambda \exp(-\lambda |x|)$ .

(c).  $f(x) = \frac{1}{\sqrt{2\pi}} \exp(-x^2/2)$ .