

### Question 1

The table below gives the traded price and paid dividends of company over 2020. What was the annual return of the company?

	Traded price	Paid dividend
31/12/2019	40	0
31/06/2020	42	0.5
31/12/2020	39	0.25

- 1) -2.5%
- 2) -0.71%
- 3) -1.88%

Correction

$$R_{2020} = \left( \frac{42+0.5}{40} \right) \left( \frac{39+0.25}{42} \right) - 1 = -0.71\%$$

### Question 2

Which of the following functions are valid utility functions for risk-averse investors?

- 1)  $f(x)=\log(x)$
- 2)  $f(x)=x^2$
- 3)  $f(x)=1-\exp(-x)$
- 4)  $x^{(1-\gamma)}/(1-\gamma)$ ,  $\gamma > 1$

Correction:  $f' > 0$  for  $x > 0$  true for all.  $f'' < 0$  for  $x > 0$  not true for 2).