

ANSWERS TO REVIEW EXERCISES

Exercise 1:

- $\frac{1023}{1024}$
- $\binom{10}{2}2^{-10}$

Exercise 2:

- Yes
- 2μ
- $4\sigma^2$

Exercise 3:

- Continuous
- No
- π^2

Exercise 4:

- $(0, 4)$ but certainly not uniformly distributed
- $(0, 1)$
- Yes. No.

Exercise 5:

- $\frac{4}{3}$
- Positively correlated
- $\frac{2}{3}$

Exercise 6:

- Discrete
- $\mathbb{E}[I] = p, \mathbb{V}\text{ar}[I] = p(1 - p)$

Exercise 7:

- $\{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$
- Binomial distributed

Exercise 8:

- Yes
- $\mathbb{E}[Y] = 10, \text{Var}[Y] = 14$

Exercise 9:

- Positively correlated
- $\frac{1}{36}$