

3. A random variable N can only take the values -1, 1, 2 and 5, with probabilities

$$\mathbb{P}(N = -1) = \frac{1}{6}, \quad \mathbb{P}(N = 1) = \frac{1}{3}, \quad \mathbb{P}(N = 2) = \frac{3}{8}, \quad \mathbb{P}(N = 4) = \frac{1}{8}.$$

(a) What are the upper and lower quartiles of N ?

(b) What is the mean of N ? Give your answer as a fraction, possibly unreduced.