

- (b) State which histogram — Figure 3 or Figure 4 — represents the distribution of S_{10} . Justify your answer.

(2 marks)

- (c) (i) Hence or otherwise, explain why it would be reasonable to assume that S_{900} can be modelled by a normal distribution.

(1 mark)

- (ii) Show that the distribution of S_{900} has a mean of \$414 and a standard deviation of \$8.10.

(2 marks)

- (iii) A charity receives 900 random donations from the app on a given day.
Calculate the probability that the charity receives at least \$400 from the 900 donations.

(1 mark)