4 Huan plays a game using a fair 8-sided spinner, numbered 1 to 8
Huan spins the spinner until the game stops.

The game stops according to the following rules

- on the first spin, if the spinner lands on a **square** number, the game stops
- on the second spin, if the spinner lands on an **even** number, the game stops
- on the third spin, if the spinner lands on a **prime** number, the game stops
- if the game is still going after 3 spins, one final spin is taken and the game stops

The random variable S represents the number of times the spinner is spun until the game stops.

(a) Show that $P(S = 2) = \frac{3}{8}$

(2)

(b) Complete the probability distribution table below for the random variable S

(2)

s	1	2	3	4
$P(S = s)$		$\frac{3}{8}$		

(c) Find $P(1.6 < S < 3.2)$

(1)