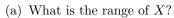
Answer the questions in the spaces provided on the question sheets. If you run out of room for an answer, continue on a separate sheet of paper.

Random variables and expectation

1.	Consider a game in which a fair die is rolled. If the die comes up 1, the player wins \$2. If the die comes
	up 2, the player wins 1 . For all other outcomes, the player loses 1 . Let X denote the amount of money
	won by the player for a single role of the die.



(b) What is the distribution over the random variable X?

(c) What is the expected amount that the player wins or loses, i.e., what is E[X]? Round to the nearest cent.

	network of 40 computers, 5 hold a copy of a particular file. Suppose that 7 computers at random Let F denote the number of computers that fail and have a copy of the file.
	What is the range of F ?
(b)	What is $p(F=2)$?
(c)	What is the distribution over the random variable F ?
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(d)	What is the expected number of computers that will fail and have a copy of the file, i.e., what is $E[F]$? Round to the nearest computer.
	Z[1]. Would to the homost compared.

2.