

5. Which of the following describes a binomial random variable? If it does, give n and p . If it does not, give a reason why not choosing from; i) The trials are not independent. ii) The trials are not Bernoulli trials. iii) The trials are not identical. iv) The number of trials is not fixed.

a) A person chooses 5 cards in succession and without replacement from a deck of 52 cards. X is the number of times an ace is chosen.

b) A machine cranks out video games so that 4% are defective. 50 games are randomly selected and tested. X is the number found to be defective.

c) A person tosses a six sided die repeatedly. X is the number of the tosses before a 6 appears on top.

d) A person tosses a six sided die 20 times and the top number is recorded. X is the sum of the top numbers.