

**PROBABILITY DISTRIBUTION**

Let  $X$  be a discrete random variable with the following probability mass function:

$x$	$P(X=x)$
-1	0.1
0	0.2
1	0.3
2	0.2
3	0.1

Find the following probabilities:

- (a)  $P(X < 1)$
- (b)  $P(X \geq 2)$
- (c)  $P(X = 0 \text{ or } X = 1)$

Find the mean and variance of  $X$ .

Find the standard deviation of  $X$ .

Find the probability that  $X$  is greater than or equal to 1.

Find the probability that  $X$  is less than 2.



Let  $X$  be a discrete random variable with the following probability mass function:

$x$	$P(X=x)$
0	0.1
1	0.2
2	0.3
3	0.2
4	0.1

Find the following probabilities:

- (a)  $P(X < 2)$
- (b)  $P(X \geq 3)$
- (c)  $P(X = 1 \text{ or } X = 2)$

Find the mean and variance of  $X$ .

Find the standard deviation of  $X$ .

Find the probability that  $X$  is greater than or equal to 2.

Find the probability that  $X$  is less than 3.

