16 The discrete random variable X has probability distribution

x	1	2	3	4	5	6
$P(X = x)$	0.3	0.1	0.2	0.1	0.1	0.2

The discrete random variable Y has probability distribution

y	2	3	4	5	6	7
$P(Y = y)$	0.3	p	0.2	0.1	p	3p + 0.05

It is claimed that $P(X \geq 3)$ is greater than $P(Y \leq 4)$

Determine if this claim is correct.

Fully justify your answer.

[4 marks]