



c. State a conclusion that can be drawn based on this value giving a reason for your answer. (2)

### Solutions

1a.

$X \sim B(20, 0.3)$	<b>M1</b>
$P(X \leq 2) = 0.0355$	<b>M1</b>
$P(X \geq 11) = 1 - 0.9829 = 0.0171$	<b>M1</b>
Therefore critical region is $(X \leq 2) \cup (X \geq 11)$	<b>M1</b>

1b.

Significance level = $0.0355 + 0.0171$	<b>M1</b>
$= 0.0526$ (or 5.26%)	<b>M1</b>

1c.

Insufficient evidence to reject $H_0$ Or sufficient evidence to accept $H_0$ /not significant	<b>M1</b>
$x = 3$ is not in the critical region	<b>M1</b>

