

d. Calculate the least number of calls that need to be made by a representative for the probability of at least 1 sale to exceed 0.95 **(3)**

### Solutions

1a.

$P(X=0) = 0.85^{10}$	<b>M1</b>
$= 0.1969$	<b>M1</b>

1b.

$P(X > 3) = 1 - P(X \leq 3)$	<b>M1</b>
$= 1 - 0.6477$	<b>M1</b>
$= 0.3523$	

1c.

$n \times 0.15 = 5$	<b>M1</b>
$n = 33$	<b>M1</b>

1d.

$1 - P(X=0) > 0.95$	<b>M1</b>
$1 - (0.85)^n > 0.95$	<b>M1</b>
$0.85^n < 0.05$ $n > 18.4$ $n = 19$	<b>M1</b>

