

(4)

Solutions

1a.

$\frac{9.5-7}{10-7}$	M1
$= \frac{5}{6}$ (or 0.833)	M1

1b.

$P(\text{Longest} > 9.5) = 1 - P(\text{all} < 9.5) = 1 - \left(\frac{5}{6}\right)^3$	M1
$= \frac{91}{216}$ (or, 0.421)	M1

1c.

$P(\text{a stick} < 7.6) = \frac{0.6}{3} = 0.2$	M1
Let Y = number of stick out of 6 < 7.6 $Y \sim B(6, 0.2)$	M1
$P(Y > 4) = 1 - P(Y \leq 4)$ $= 1 - 0.9984$	M1
$= 0.0016$	M1

