

1

Liam takes part in long jump competitions.

Here is some information about 40 of his jumps.

Length of jump, d metres	Number of jumps	Midpoint	
$7.0 \leq d < 7.4$	15	7.2	
$7.4 \leq d < 7.8$	18	7.6	
$7.8 \leq d < 8.2$	7	8.0	
Total = 40			

Work out an estimate of the mean distance of these 40 jumps.

Give your answer as a decimal.

[3 marks]

$$\text{mean} = \frac{(7.2 \times 15) + (7.6 \times 18) + (8.0 \times 7)}{15 + 18 + 7} \quad \checkmark(1)$$

$$= \frac{108 + 136.8 + 56}{40} \quad \checkmark(1)$$

$$= \frac{300.8}{40} = 7.52 \quad \checkmark(1)$$

Answer 7.52 m