Marked example 3

Paper 2 style · Graphic display calculator

3 5 marks SL 4.3 ●●○ Typical

The times, t minutes, that 50 customers waited at a counter are grouped below.

t	$0 < t \leq 10$	$10 < t \leq 20$	$20 < t \leq 30$	$30 < t \leq 40$	$40 < t \leq 50$
frequency	5	12	18	10	5

(a) Write down the modal class. **[1]**

(b) Find an estimate of the mean waiting time. **[2]**

(c) Find an estimate of the standard deviation of the waiting times. **[2]**

MARKSCHEME (a)

$20 < t \leq 30$ **A1**

Total 1 mark

MARKSCHEME (b)

mid-interval values 5, 15, 25, 35, 45 **(M1)**

24.6 minutes **A1**

Total 2 marks

MARKSCHEME (c)

11.1 minutes $(11.1283\ldots)$ **A2**

Total 2 marks

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