TG ADI **3** The following table shows the velocity (in metres per second) of a moving object evaluated at 10-second intervals.

Time	30	40	50	60	70
Velocity	0	4.6	5.7	8	9.9

Use the trapezoidal rule to obtain an estimate of the distance travelled by the object over the time interval $30 \leq t \leq 70$.

$$\text{Distance} = \frac{10}{2}[0 + 9.9 + 2(4.6 + 5.7 + 8 \times 10)]$$

$$= 232.5$$

$\therefore$ the object has travelled approximately 232.5 m.