

# OCR

Oxford Cambridge and RSA

**Wednesday 8 June 2016 – Morning**

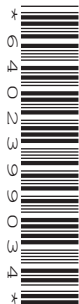
**AS GCE/Level 3 Certificate**

**QUANTITATIVE METHODS (MEI)**

**G244/01** Introduction to Quantitative Methods (IQM)

**Insert**

**Duration:** 1 hour 30 minutes



## INFORMATION FOR CANDIDATES

- This Insert contains a copy of the pre-release material for use with the Question Paper.
- This document consists of **4** pages. Any blank pages are indicated.

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This table shows the changes in average speed on some of Cambridge's commuter routes from 2008 to 2014.

CHANGE IN AVERAGE SPEED FROM 2008–2014							
Route	Dec 2008 avg speed	Dec 2014 avg speed	Change in speed	Route	Dec 2008 avg speed	Dec 2014 avg speed	Change in speed
A10 northbound	38.2	39.3	1.1	A1303 eastbound	23	18.9	−4.1
A10 southbound	34.9	33.4	−1.5	A1303 westbound	23.8	22.4	−1.4
A1096 northbound	31.8	29.7	−2.1	A1304 northbound	48.7	47.2	−1.5
A1096 southbound	25.8	23.4	−2.4	A1304 southbound	48.1	46.9	−1.2
A1123 eastbound	33.6	31.8	−1.8	A1307 eastbound	29.5	28.8	−0.7
A1123 westbound	31.7	32.4	0.7	A1307 westbound	30.7	28.9	−1.8
A1134 (Cambridge ring road) northbound	18.8	17.4	−1.4	A1309 northbound	12	14.6	2.6
				A1309 southbound	16.8	16.2	−0.6
A1134 (Cambridge ring road) southbound	13.1	14.3	1.2	A142 eastbound	39.4	37.9	−1.5
				A142 westbound	40.9	39.6	−1.3
A1198 northbound	43.2	42.6	−0.6	A505 eastbound	38.9	36.8	−2.1
A1198 southbound	37.3	33.3	−4	A505 westbound	42.7	38.1	−4.6
A1301 northbound	28	19.3	−8.7	A603 eastbound	25.1	20.8	−4.3
A1301 southbound	35.5	28.5	−7	A603 westbound	23.7	26.7	3
All speeds are in miles per hour							

**Information about the first appearance of flowers from Mail Online News.**

- (i) They're blooming early! Daffodils and dianthus flowering months early due to unusually warm weather

<http://www.dailymail.co.uk/news/article-2085206/Theyre-blooming-early-Snowdrops-daffo>. Item removed due to third party copyright restrictions.

**(ii) Further information**

Information about the dates of first appearance of various flowers may be found on the Woodland Trust website.

Typical stopping distances reproduced from the Highway Code. It shows typical stopping distances for cars travelling at different speeds.

### Typical Stopping Distances

The distances shown are a general guide. The distance will depend on your attention (thinking distance), the road surface, the weather conditions and the condition of your vehicle at the time

**Thinking Distance** **Braking Distance**  
Average car length = 4 metres (13 feet)

<b>20 mph</b> (32 km/h)	<b>6 m</b>	<b>6 m</b>	<b>= 12 metres (40 feet)</b> or three car lengths
<b>30 mph</b> (48 km/h)	<b>9 m</b>	<b>14 m</b>	<b>= 23 metres (75 feet)</b> or six car lengths
<b>40 mph</b> (64 km/h)	<b>12 m</b>	<b>24 m</b>	<b>= 36 metres (118 feet)</b> or nine car lengths
<b>50 mph</b> (80 km/h)	<b>15 m</b>	<b>38 m</b>	<b>= 53 metres (175 feet)</b> or thirteen car lengths
<b>60 mph</b> (96 km/h)	<b>18 m</b>	<b>55 m</b>	<b>= 73 metres (240 feet)</b> or eighteen car lengths
<b>70 mph</b> (112 km/h)	<b>21 m</b>	<b>75 m</b>	<b>= 96 metres (315 feet)</b> or twenty-four car lengths

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