

Graphs of Linear Equations Mark Scheme

1. (a) (i) $\frac{1}{2}$ hour 2
B1 for $\frac{1}{2}$ hour oe
- (ii) 100
B1 for 100
- (b) 80 2
B2 for 80
(B1 for $120/1.5$)
- (c) 16 4
 $320\text{km} = 320 \times 5/8 (= 200 \text{ miles})$
 Number of gallons = $200 \div 40 (=5)$
 Cost = $5 \times \text{£}3.20$
M1 for $320 \times 5/8$
M1 for " 200 " $\div 40$
M1 for " 5 " $\times \text{£}3.20$
A1 for 16

[8]

2. (a) 10 1
B1 cao
- (b) 5.5 1
B1 ± 0.3 pounds
- (c) 50 3
 $\frac{110}{22}$
M1 for use of graph at 11 or $\frac{110}{22}$
A1 for 5
A1 cao
SC B2 for 49.5 – 50.6

[5]

3. (a) 15 1
B1 for 15 (± 1)
- (b) 15 1
B1 for 15 (± 0.4)
- (c) 2
B1 horiz. line from (2, 20) to (3, 20)
B1 line from (3, 20) to (5, 0) or horizontal translation of it
SC B1 for any journey ending at (5, 0)

[4]

4.	(a)	1330 <i>B1 for 1330 or 1.30pm</i>	1	
	(b)	0.65 <i>B1 for 0.65 (accept 0.6 < rate < 0.7)</i>	1	
	(c)	Rain slowed oe <i>B1 for description (eg. Rain slowed, got less heavy, dropped from 1.5 to 1)</i>	1	[3]
5.	(a)	Graph completed <i>B2 cao tol $\pm 1mm$ (B1 if either section correct)</i>	2	
	(b)	Line drawn <i>B1 cao tol $\pm 1mm$</i>	1	
	(c)	(19) <i>B1 ft from graph – at any intersection between a line segment of negative gradient and a line associated with the passenger train</i>	1	[4]