Uses of graphs – Answers

Reading scales

(a) 12cm (b) 28cm (c) 0.32kg (d) 0.68kg (e) 2800km (f) 5600km

Reading scales on graphs

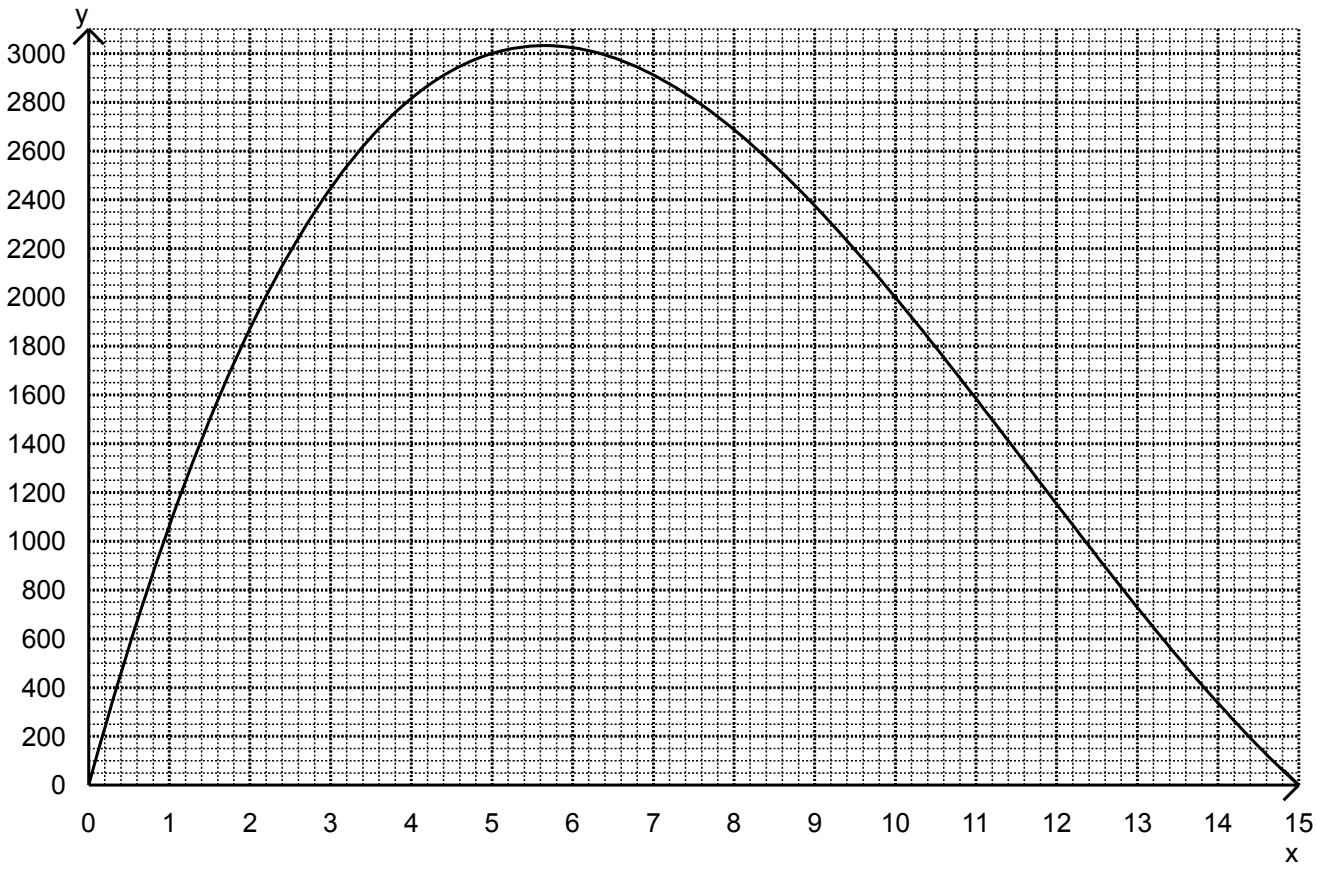
1) (a) 2 (b) 0.2 (c) 5
2) (a) 0.5 (b) 0.05 (c) 20
3) (a) 5 (b) 0.5 (c) 2
4) (a) 0.25 (b) 0.025 (c) 40
5) (a) 2.5 (b) 0.25 (c)4

Using Graphs to solve problems 1

1) (a) AB = 40 – 2x AD = 30 – 2x
(b) y = x(40-2x)(30-2x)
(c)

x	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
y	0	1064	1872	2448	2816	3000	3024	2912	2688	2376	2000	1584	1152	728	336	0

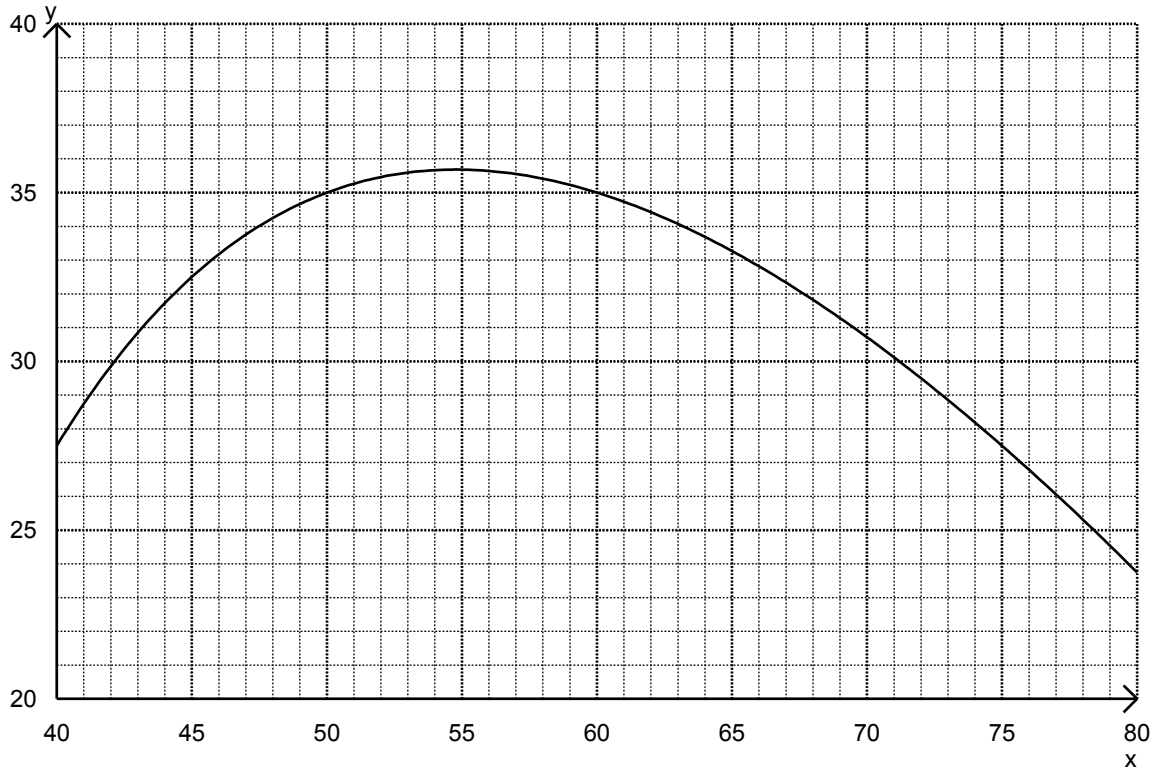
(d)



(e) 3.1cm or 8.6cm
(f) 5.7cm

2) (a)

x	40	45	50	55	60	65	70	75	80
y	27.5	32.5	35	35.68	35	33.27	30.71	27.5	23.75

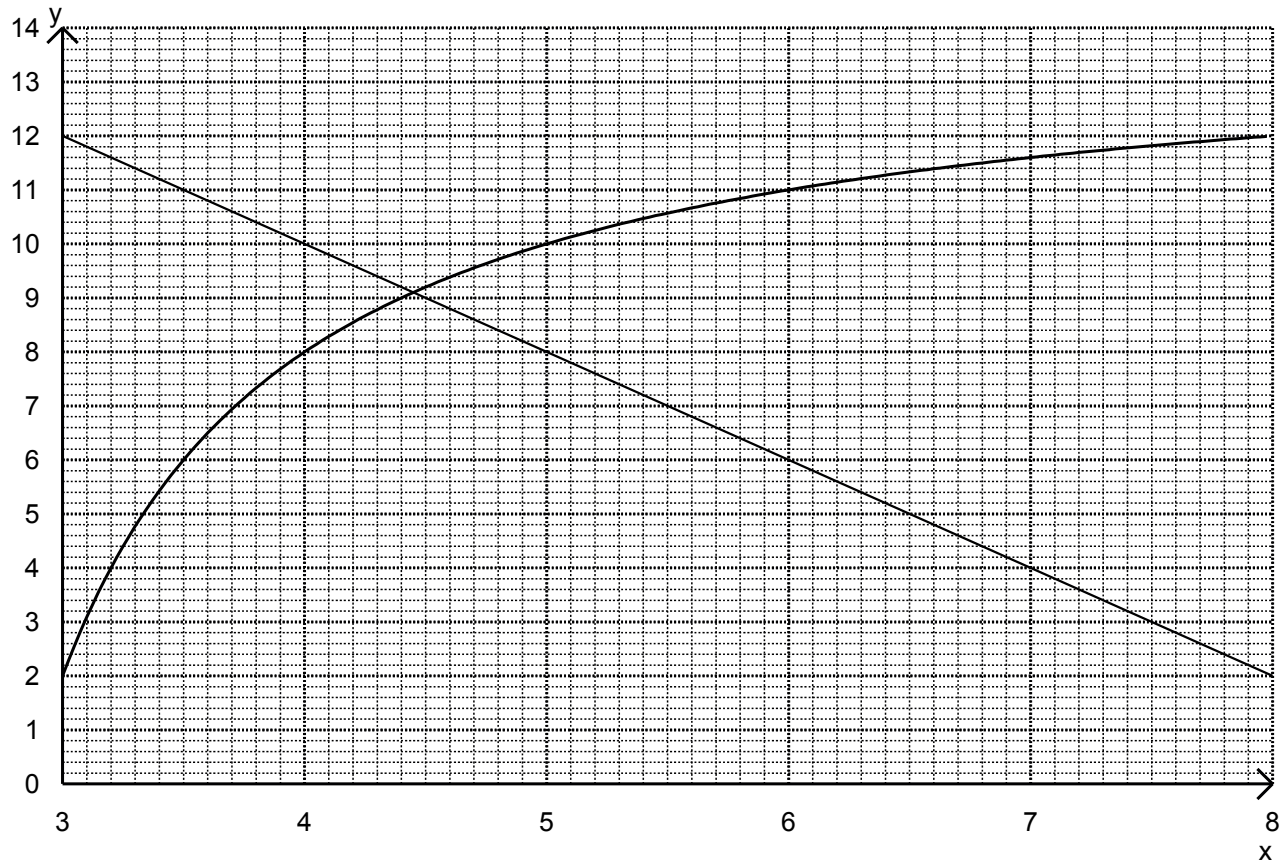


(b) 27.5 miles per gallon
(c) 55 mph

Using graphs to solve problems 2

1)

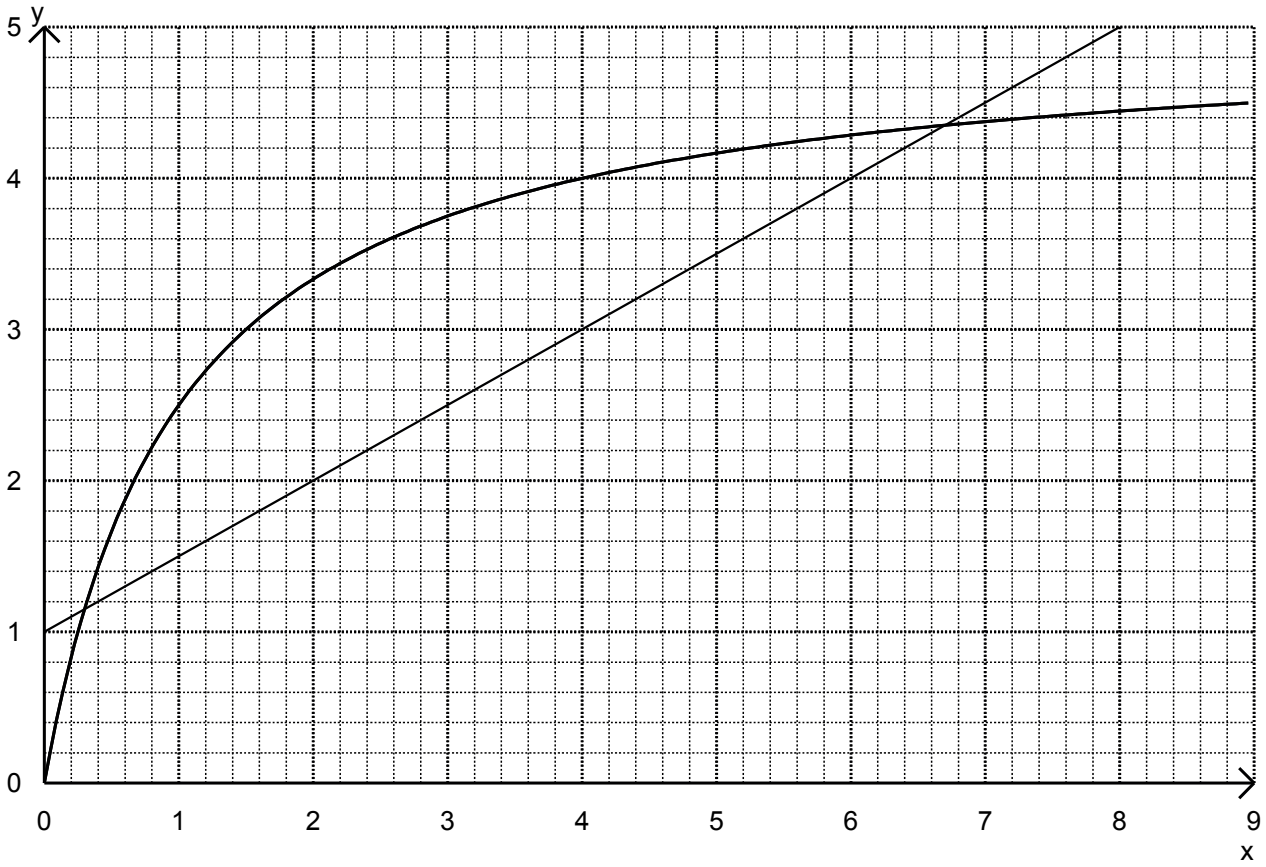
x	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8
y	2	6	8	9.2	10	10.57	11	11.33	11.6	11.82	12



(b) 14000 (d) £4.45

2) (a)

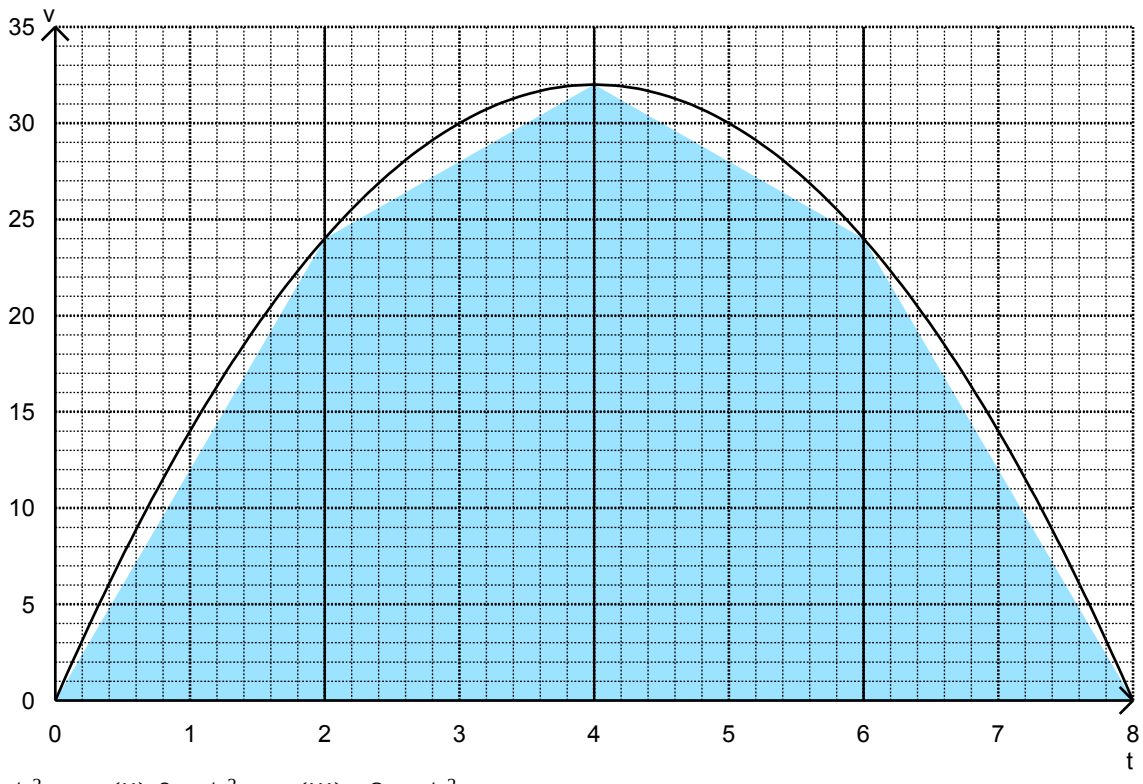
x	0	1	2	3	4	5	6	7	8	9
R	0	2.5	3.333	3.75	4	4.167	4.286	4.375	4.444	4.5



(b) £5000 (d) Revenue £4000, costs £3000, profit £1000
(e) Between 300 and 6700 (f) 2200, profit £1250

Velocity – Time Graph

t	0	1	2	3	4	5	6	7	8
v	0	14	24	30	32	30	24	14	0



(b) (i) 4 m/s^2 (ii) 0 m/s^2 (iii) –8 m/s^2
(c) 24 + 56 + 56 + 24 = 160m