



MATHEMATICS



ANSWER BOOKLET

Unit 3

Numeracy

Whole Numbers

Exercise 1 – Page 2

1	15	2	328	3	60	4	738
5	826	6	1235	7	988	8	14
9	8	10	123	11	43	12	152
13	247	14	38	15	49	16	99
17	100	18	1	19	1	20	3843
21	40	22	50	23	70	24	80
25	90	26	40	27	50	28	20
29	120	30	340	31	350	32	520
33	880	34	750	35	840	36	90
37	100	38	220	39	670	40	190
41	300	42	700	43	80	44	200
45	700	46	500	47	300	48	900
49	1000	50	3200	51	7800	52	7900
53	8600	54	6200	55	8300	56	2300
57	3500	58	23800	59	72200	60	94400
61	8000	62	6000	63	2000	64	4000
65	24000	66	44000	67	56000	68	67000
69	12000	70	99000	71	19000	72	24000
73	62000	74	37000	75	40000	76	53000

Exercise 2 – Page 3

1	662	2	285	3	44, 50, 100, 324			
4	a 6, 7 e 17, 20	b	12, 14	c	35, 40	d	95, 94	
5	a £3.01	b	£30.10	c	£51.17			
6	If rounding to one figure accuracy							
	a	100	b	80	c	80	d	30
	e	90	f	30	g	600	h	100
	i	900	j	900	k	200	l	400
	m	5000	n	8000	o	4000	p	13000
	q	10000	r	3000				

Decimals

Exercise 1 – Page 4

1	8.4	2	5.8	3	2.4	4	5.2
5	3.2	6	12.5	7	11.0	8	11.1
9	23.8	10	72.5	11	93.6	12	82.4
13	8.0	14	8.3	15	6.5	16	9.9
17	12.3	18	135.7	19	5.38	20	2.85
21	9.31	22	9.30	23	7.83	24	8.54
25	6.69	26	6.70	27	13.49	28	15.33
29	43.14	30	9.88	31	12.35	32	23.46
33	33.33	34	5.56	35	3.80	36	42.32

Exercise 2 – Page 4

1	3.44	2	9.84	3	8.49	4	8.89
5	5.71	6	8.73	7	7.55	8	8.26
9	10.12	10	9.65	11	9.76	12	9.65
13	13.75	14	15.01	15	16.83		

Exercise 3 – Page 5

1	10.8	2	10.2	3	30.1	4	30.7
5	4.1	6	6.43	7	7.86	8	7.01
9	5.77	10	7.77	11	7.6	12	16.2
13	15.5	14	59.56	15	19.93	16	4.27
17	14.07	18	14.29	19	18.42	20	15.53

Exercise 4 – Page 5

1	17.3	2	15.62	3	13.52	4	16.81
5	2.38	6	124.2cm	7	30.7kg	8	23.2
9	85.2kg						

Exercise 5 – Page 6

1	14.31	2	28.51	3	41.2	4	26.4
5	52.31	6	66.82	7	82.51	8	32.78
9	82.27	10	81	11	63.34	12	20.5
13	33.61	14	15.88	15	91.99		

Exercise 6 – Page 6

1	2.5	2	7.8	3	18.5	4	0.9
5	14.5	6	6.85	7	31.19	8	18.56
9	66.85	10	47.37	11	10.43	12	20.52

21	66.99	14	18.32	15	33.17	16	11.05
17	6.78	18	8.41	19	32.49	20	56.42
21	10.8	22	77.4	23	42.3	24	27.92
25	35.28	26	57.6	27	0.29	28	8.3

Exercise 7 – Page 7

1	97.8	2	205.8	3	77.2	4	117.2
5	103.2	6	89.1	7	214.2	8	74.05
9	87.93	10	653.59	11	94.05	12	154.88
13	179.4	14	142.48	15	134.37	16	670.4
17	227.68	18	366.2	19	85.41	20	644.07
21	120	22	44.52	23	141.95	24	540.18

Exercise 8 – Page 7

1	42	2	73	3	28	4	143
5	172.8	6	182.9	7	383.5	8	420.2
9	310	10	670	11	430	12	790
13	4281	14	3991	15	9981	16	4300
17	6200	18	13300	19	19900	20	19910
21	1403	22	39730	23	47830	24	57190
25	40.2	26	87.5	27	747.2	28	742.5
29	87.6	30	170.1	31	9.88	32	36.9
33	56.52	34	509.6	35	665.6	36	222.03
37	146.48	38	708.48	39	360.12		

Exercise 9 – Page 8

1	5.7	2	0.62	3	1.34	4	2.86
5	3.824	6	1.783	7	21.05	8	0.575
9	2.032	10	2.4323	11	13.258	12	6.723
13	5.3256	14	17.6973	15	2.69364	16	1.7756
17	2.93567	18	1.95621	19	1.2345	20	7.3246

Exercise 10 – Page 8

1	0.56	2	0.84	3	0.43	4	3.62
5	5.85	6	4.3	7	8.5	8	27.8
9	6.66	10	91	11	53.4	12	6.37
13	7.35	14	8.21	15	9.99	16	0.42
17	0.63	18	0.77	19	0.1	20	0.08
21	3.4	22	5.7	23	5.6	24	17.5
25	8.7	26	4.8	27	6.1	28	1.4

29	23.9	30	5.49	31	2.87	32	8.4
33	2.47	34	6.38	35	10.25	36	7.77
37	66.7	38	50.8	39	0.76		

Exercise 11 – Page 9

1	124.2cm	2	24.7cm	3	73cm	4	16.4cm
5	30.7kg	6	1.65 l	7	23.2cm	8	2.68s
9	19.4ml	10	1.08 l				

Fractions

Exercise 1 – Page 10

1	$\frac{1}{4}$	2	$\frac{1}{2}$	3	$\frac{1}{3}$	4	$\frac{2}{3}$	5	$\frac{3}{4}$
6	0	7	$\frac{2}{5}$	8	$\frac{3}{5}$	9	$\frac{1}{5}$	10	1
11	$\frac{1}{6}$	12	$\frac{5}{6}$	13	$\frac{6}{10}$ or $\frac{3}{5}$	14	$\frac{1}{10}$	15	$\frac{7}{10}$
16	$\frac{9}{10}$	17	$\frac{1}{2}$	18	$\frac{1}{4}$	19	$\frac{1}{4}$	20	$\frac{3}{4}$

Exercise 2 – Page 11

1	24	2	5	3	12	4	31
5	14	6	13	7	7	8	12
9	38	10	18	11	18	12	25
13	16	14	15	15	46	16	27
17	15	18	18	19	3	20	5
21	7	22	10	23	4	24	5
25	7	26	9	27	17	28	24
29	12	30	32	31	6.5	32	9.5

Exercise 3 – Page 11

1	46	2	90	3	60	4	56
5	43	6	38	7	104	8	561
9	188	10	216	11	120	12	266
13	111	14	80	15	553	16	405
17	99	18	291	19	273	20	243
21	189	22	116	23	195	24	159
25	315	26	288	27	36	28	232
29	168	30	434				

- 5 a £28.40 b £57 c £136 d £250 e £137.80
 f £530 g **Total = £266.59** **VAT = £53.32** **Bill = £319.91**
 h £61.68

Reading Scales

Exercise 1 – Page 18

	A	B	C	D	E	F	G	H	I	J	K
1	4.62	4.65	4.73	4.79	4.85	4.86	4.7	4.71			
2	5.93	5.95	5.8	5.81	5.75	5.88	5.72	5.97			
3	2.2	2.14	2.25	2.29	2.05	2.03	2.08	2.11			
4	13.5	13.3	13.43	13.57	13.34	13.55	13.59	13.38			
5	7.1	6.9	6.95	7.13	6.92	6.98	7.01	7.06			
6	15.1	15.32	15.4	15.05	15.17	15.23	15.28	15.01	15.37	15.14	15.09
7	3.8	3.75	4.0	3.87	3.77	3.94	4.06	3.91	4.04	4.09	3.98
8	1.1	1.15	1.02	1.24	0.9	0.93	0.95	1.28	0.98	1.06	1.19
9	6.22	6.36	6.3	6.44	6.24	6.46	6.48				
10	9.8	9.72	9.86	9.78	9.75	9.83	9.94				
11	11.1	10.9	11.02	11.18	11.06	10.98	11.13				
12	8.5	8.7	8.64	8.32	8.58	8.44	8.37	8.53			
13	19.8	20.0	19.74	19.86	20.02	20.08	19.94	19.98			
14	5.6	5.7	5.45	5.55	5.75	5.65	5.48	5.51	5.67	5.74	
15	1.1	0.9	0.8	1.15	0.85	0.95	1.05	0.82	1.19	0.93	1.01

Exercise 2 – Page 20

- 1 150ml 2 50ml 3 300ml 4 190ml
 5 1.1 litres 6 1.3 litres
 7 A = 100g B = 400g C = 900g
 8 A = 40g B = 480g C = 740g
 9 A = 170g B = 450g C = 840g
 16 1.45kg
 17 a X = 2.6°C Y = 32.7°C b X = 1.4°C Y = 31.8°C
 18 a 2.5 b 1.6 c $7\frac{1}{3}$ d 6.25
 19 29.72
 20 a 25mpg b 112km/h c 47.5km/h d 97km/h
 e same as d – 97km/h

Probability

Exercise 1 – Page 26

All answers depend on when and who is answering

- | | | | |
|---|---|---|------------|
| 1 | Unlikely (unless you are doing this on Christmas Eve) | | |
| 2 | Unlikely | 3 | Unlikely |
| | | 4 | Likely |
| 5 | Impossible | 6 | Certain |
| | | 7 | Likely |
| 8 | Impossible | 9 | Impossible |

Exercise 2 – Page 27

- | | | | | | | | | | |
|---|---|---|---------------|---|---------------|---|---------------|---|---------------|
| 1 | 0 | 2 | $\frac{1}{2}$ | 3 | $\frac{1}{2}$ | 4 | $\frac{1}{2}$ | 5 | $\frac{1}{2}$ |
|---|---|---|---------------|---|---------------|---|---------------|---|---------------|

Exercise 3 – Page 27

- | | | | | | | |
|----|---|--------------------------------|---|-------------------------------|---|-------------------------------|
| 1 | a | $\frac{3}{7}$ | b | $\frac{2}{7}$ | | |
| 2 | a | $\frac{3}{6} = \frac{1}{2}$ | b | $\frac{2}{6} = \frac{1}{3}$ | | |
| 3 | a | $\frac{2}{6} = \frac{1}{3}$ | b | $\frac{2}{6} = \frac{1}{3}$ | c | $\frac{3}{6} = \frac{1}{2}$ |
| | | | | | d | $\frac{3}{6} = \frac{1}{2}$ |
| 4 | a | $\frac{3}{8}$ | b | $\frac{2}{8} = \frac{1}{4}$ | c | $\frac{4}{8} = \frac{1}{2}$ |
| | | | | | d | $\frac{4}{8} = \frac{1}{2}$ |
| 5 | a | $\frac{1}{6}$ | b | $\frac{3}{6} = \frac{1}{2}$ | c | $\frac{3}{6} = \frac{1}{2}$ |
| 6 | a | $\frac{2}{5}$ | b | $\frac{3}{5}$ | c | $\frac{1}{5}$ |
| 7 | a | $\frac{15}{30} = \frac{1}{2}$ | b | $\frac{5}{30} = \frac{1}{6}$ | c | $\frac{10}{30} = \frac{1}{3}$ |
| 8 | a | $\frac{10}{30} = \frac{1}{3}$ | b | $\frac{20}{30} = \frac{2}{3}$ | | |
| 9 | a | $\frac{3}{8}$ | b | $\frac{2}{8} = \frac{1}{4}$ | c | $\frac{5}{8}$ |
| 10 | a | $\frac{3}{10}$ | b | $\frac{4}{10} = \frac{2}{5}$ | c | $\frac{6}{10} = \frac{3}{5}$ |
| 11 | a | $\frac{4}{52} = \frac{1}{13}$ | b | $\frac{13}{52} = \frac{1}{4}$ | c | $\frac{1}{52}$ |
| | d | $\frac{3}{13}$ | | | | |
| 12 | a | $\frac{15}{50} = \frac{3}{10}$ | b | $\frac{10}{50} = \frac{1}{5}$ | c | $\frac{25}{50} = \frac{1}{2}$ |
| | d | $\frac{25}{50} = \frac{1}{2}$ | | | | |

Exercise 4 – Page 30

- | | | | | | | |
|---|------|-------------------------------|-----|------------------------------|------|------------------------------|
| 1 | a | $\frac{1}{5}$ | b | $\frac{1}{4}$ | | |
| 2 | a | $\frac{5}{10} = \frac{1}{2}$ | b | $\frac{3}{9} = \frac{1}{3}$ | | |
| 3 | a | $\frac{6}{16} = \frac{3}{8}$ | b | $\frac{5}{15} = \frac{1}{3}$ | | |
| 4 | a | $\frac{1}{6}$ | b | $\frac{5}{5} = 1$ | | |
| 5 | a | $\frac{5}{17}$ | b | $\frac{4}{16} = \frac{1}{4}$ | | |
| 6 | a | $\frac{8}{13}$ | b | $\frac{7}{12}$ | | |
| 7 | a i) | 30 | ii) | 6 | iii) | $\frac{6}{30} = \frac{1}{5}$ |
| | b i) | $\frac{3}{30} = \frac{1}{10}$ | ii) | $\frac{11}{30}$ | iii) | $\frac{19}{30}$ |