

Mathematics

Unit 1: Integers, powers and roots.

The student's book



Chapter 1

Check in

U	ICC	n III														
1	a	-1		b	-2			c		3		d	-1			
	e	-6		f	-3											
2	a	16		b	125			c	1			d	27			
3	a	25		b	13			с	2	5						
4	a	2500		b	246	50		c	2	000						
E	er	cise	14													
1	b	2, 0, -	2													
2		3		3		c	-2		d	0	e	-1		f	1	
3	a	-3	b	-5		с	-7		d	-6	e	-10)	f		
4	a	-6	b	-2		с	-5		d	-7	e	-79)	f	-511	
	g	-675	h	-68	82											
5	a	0	b	-1		c	-7		d	-7	e	3		f	-1	
6	a	-2	b	2		c	1		d	-2	e	8		f	0	
7	a	7	b	12		c	13		d	4	e	-5		f	-5	
	g	3	h	11												
8	a	8	b	1		c	4			11	e	0		f	-1	
	g	6	h	5		i	7		j	11	k	-1		1	-13	
9		110														
1	0 -	1°C														

-1	-4	23
30	6	-18
11	16	13

- 12 a Wrong, that rule only applies when the signs are next to each other when adding and subtracting, the correct answer is ⁻⁷
 - **b** Wrong, he has subtracted the wrong way round 8 10 = -2**c** correct
 - **d** Wrong, 7 4 = 7 + 4 = 11, he has subtracted 7 from 4
 - e Wrong, he should have done 7 4 + 2 = 3 + 2 = 5 as there are no brackets around the 4 + 2

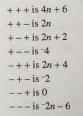
4 a	-	2	-1	other b answers	-	-1	0	other answers
	3	1	4	are possible	3	4	3	are possible
	4	2	5		4	5	4	

Investigation page 10

14

If you use algebra and call the numbers n, n + 1, n + 2 and n + 3 you can soon work out the formula relating all the answers to the starting number n.

e.g. n - (n + 1) + (n + 2) - (n + 3) = n - n - 1 + n + 2 - n - 3= 2



Exercise 1B					
1 a -8 b -20	с	-12			6 -56
2 a -12 b -16	с	-18	d -20	e -6	f -56
3 b -20 c -12	d	-30	e -2	-16	f -100
4 a -24 b -21	c	-4	d -8	e -16	1 100
g -28 h -18	i	-27	d -24	e -24	f -33
5 a -54 b -32 g -3 h -9	c i	-40 -36	u 24	C 21	
6	c	5	d -4	e -4	f -3
6 a 2 b 3 7 a 2 b 3	c	-	d -4	e -4	f -3
8 a $3 \times \Box = 18$] = -8	c -3×	□ = 12
$d^{-3} \times \Box = 9$	e		□ = 16	$f -1 \times$	$\Box = -4$
9 a 6 b -4	с	-4	d -3	e -4	f 4
10 a -60 b -36		-4			
11 multiple answers,	e.g.	-735 :	$= 15 \times -49$		
$-735 \div -49 = 15$ 12 a -2852 b -630		816	d -17.84	56 e -7	⁷ 2 f 17
12 a 2852 b 650 13 When you multipl	C V OT	divid	e two nega	tive num	bers vou get a
positive answer.	y or	uivia	e two nega	arre nam	
14 No, because to ge	tan	egativ	e answer v	when mul	tiplying one
value must be pos	itive	and c	one value n	nust be n	egative so it
won't be the same	nur	nber r	nultiplying	by itself	
Exercise 1C					
	1000)	c 600	d 2	200
e 3000 f	6				
2 $2 \times 35 = 70 \text{ km}$					
3 no					
4 5		100 0	0 -52 201	1 06 05	
5 -116, 134, 213, 32	2, 9	408, 0	9 11 101		
			,,	1, 20.25	
Exercise 1D					
1 a 4 b 23		c 1	1 d	64	e 19
1 a 4 b 23 f -5 g 3		c 1 h 0	1 d i	64 -5	
1 a 4 b 23		c 1	1 d i 7 d	64 -5	e 19 e 17
1 a 4 b 23 f $^{-5}$ g 3 2 a 25 b 10 f 9 g 16 3 a $(6+4) \times 10 =$		<pre>c 1 h 0 c 1 h 1</pre>	1 d i 7 d	64 -5 6 -30	e 17
1 a 4 b 23 f $^{-5}$ g 3 2 a 25 b 10 f 9 g 16 3 a (6+4) × 10 = c 100 - 10 × (6 - 10)	- 4)	c 1 h 0 c 1 h 1 = 80	1 d i 7 d 3 i b 3+12	$ \begin{array}{r} 64 \\ -5 \\ 6 \\ -30 \\ \div (2+1) \end{array} $	e 17
1 a 4 b 23 f $^{-5}$ g 3 2 a 25 b 10 f 9 g 16 3 a (6+4)×10= c 100-10×(6-4) 4 He has added the	– 4) 2 to	c 1 h 0 c 1 h 1 = 80 the 8	1 d i 7 d 3 i b 3 + 12 instead of	64 -5 6 -30 + (2 + 1) to the 15	e 17
1 a 4 b 23 f $^{-5}$ g 3 2 a 25 b 10 f 9 g 16 3 a (6+4)×10= c 100-10×(6- 4 He has added the subtracted 10. Th	- 4) 2 to e co	c 1 h 0 c 1 h 1 = 80	1 d i 7 d 3 i b 3 + 12 instead of nswer is 9.	64 -5 6 -30 + (2 + 1) to the 15	e 17
1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a (6+4)×10= c 100-10×(6- 4 He has added the subtracted 10. Th	- 4) 2 to e co 0	c 1 h 0 c 1 h 1 = 80	$\begin{array}{ccc} 1 & \mathbf{d} \\ \mathbf{i} \\ 7 & \mathbf{d} \\ 3 & \mathbf{i} \\ \mathbf{b} & 3 + 12 \\ \text{instead of } \\ \text{nswer is 9} \\ 0 & \mathbf{d} \\ \end{array}$	64 -5 6 -30 + (2 + 1) to the 15	e 17) = 7 , then
1 a 4 b 23 f $^{-5}$ g 3 2 a 25 b 10 f 9 g 16 3 a (6+4)×10= c 100-10×(6- 4 He has added the subtracted 10. Th 5 a 9 b $^{-20}$	- 4) 2 to e co))	c 1 h 0 c 1 h 1 = 80 the 8 rrect a c 1	$\begin{array}{ccc} 1 & \mathbf{d} \\ \mathbf{i} \\ 7 & \mathbf{d} \\ 3 & \mathbf{i} \\ \mathbf{b} & 3 + 12 \\ \text{instead of } \\ \text{nswer is 9} \\ 0 & \mathbf{d} \\ \end{array}$	$64 \\ -5 \\ 6 \\ -30 \\ \div (2 + 1) \\ to the 15 \\ 29$	e 17
1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a $(6+4) \times 10 =$ c $100 - 10 \times (6 -$ 4 He has added the subtracted 10. Th 5 a 9 b -20 6 a -10 b -50 7 a 4 b 4 8 If you do not get t	- 4) 2 to e co 0 0 c he s	c 1 h 0 c 1 h 1 = 80 the 8 rrect a c 1 c 7 12 ame an	$\begin{array}{cccc} 1 & \mathbf{d} \\ \mathbf{i} \\ 7 & \mathbf{d} \\ 3 & \mathbf{i} \\ \mathbf{b} & 3 + 12 \\ \text{instead of } \\ \text{instead of } \\ \text{nswer is 9} \\ 0 & \mathbf{d} \\ \mathbf{d} & 2 \\ \text{nswers che} \end{array}$	64 -5 6 -30 + (2 + 1) to the 15 - 29 6 e 8 ck both n	e 17) = 7 , then e $^{-5}$ f 5 nethods again.
1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a $(6+4) \times 10 =$ c $100 - 10 \times (6 -$ 4 He has added the subtracted 10. Th 5 a 9 b -20 6 a -10 b -50 7 a 4 b 4 8 If you do not get t then check with a	- 4) 2 to e co)) c he s frier	c 1 h 0 c 1 h 1 = 80 the 8 rrect a c 1 c 7 12 ame and d. If y	1 d i 7 d 3 i b $3 + 12$ instead of inswer is 9. 0 d 6 d d 2 mswers chear you still are	64 -5 6 -30 + (2 + 1) to the 15 $29 - 6 = 8$ ck both n cunsure a	e 17) = 7 , then e $^{-5}$ f 5 nethods again, usk your teacher.
1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a $(6+4) \times 10 =$ c $100 - 10 \times (6-4)$ 4 He has added the subtracted 10. Th 5 a 9 b -20 6 a -10 b -50 7 a 4 b 4 8 If you do not get the then check with a 9 No, he is incorrect	- 4) 2 to e co)) c he s frien	c 1 h 0 c 1 h 1 = 80 the 8 rrect a c 1 c 7 12 ame aa nd. If y cause	1 d i 7 d 3 i b $3 + 12$ instead of inswer is 9. 0 d 6 d d 2 mswers chear you still are	64 -5 6 -30 + (2 + 1) to the 15 $29 - 6 = 8$ ck both n cunsure a	e 17) = 7 , then e $^{-5}$ f 5 nethods again, usk your teacher.
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1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a $(6+4) \times 10 =$ c $100 - 10 \times (6-4)$ 4 He has added the subtracted 10. The 5 a 9 b -20 6 a -10 b -50 7 a 4 b 4 8 If you do not get the then check with a 9 No, he is incorrect first so $10 - 2^2 =$ 10 a $(6 + 2^2) \times 10 =$ c $10^2 - 10 \times (6-1)^2$ 11 = $20 - 8 + 2$	(-4) 2 to 2 to e co 0 0 0 c the s frienet be (10 - 100) (-4)	c 1 h 0 c 1 h 1 e 80 the 8 r rrect a c 1 c 7 12 anne au and. If y cause 4 = 6 0 = 80 a Addi	1 d i 7 d 3 i b $3 + 12$ instead of inswer is 9. 0 d 6 d d 2 nswers chear you still are you have t b $3 + 12$ tion	64 -5 6 -30 + (2 + 1) +	e 17) = 7 , then e $^{-5}$ f 5 nethods again, isk your teacher. ut the indices
1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a (6+4) × 10 = c 100 - 10 × (6- 4 He has added the subtracted 10. Th 5 a 9 b -20 6 a -10 b -50 7 a 4 b 4 8 If you do not get t then check with a 9 No, he is incorrect first so $10 - 2^2 = -10$ 10 a (6+2 ²) × 10 = c $10^2 - 10 × (6-$ 11 = 20 - 8 + 2 T = 20 - 10	(-4) 2 to e co)) c the s frien t be (10 - 2) (-4) Then Then	c 1 h 0 c 1 h 1 = 80 c 1 c 7 12 ame au n and . If y cause 4 = 6 c 1 12 ame au n and . If y cause 4 = 60 c 1 14 14 14 14 14 14 1	1 d i 7 d 3 i b $3 + 12$ instead of inswer is 9. 0 d 6 d 2 n swers chear you still are you have t b $3 + 12$ tion raction	64 -5 6 -30 + (2 + 1) to the 15 29 6 e 8 ck both m cunsure a o work o	e 17) = 7 , then e $^{-5}$ f 5 nethods again, isk your teacher. ut the indices 1) = 7
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1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a $(6+4) \times 10 =$ c $100 - 10 \times (6-4)$ 4 He has added the subtracted 10. Th 5 a 9 b -20 6 a -10 b -50 7 a 4 b 4 8 If you do not get the then check with a 9 No, he is incorrect first so $10 - 2^2 =$ 10 a $(6 + 2^2) \times 10 =$ c $10^2 - 10 \times (6-1)^2 =$ 10 a $(6 + 2^2) \times 10 =$ c $10^2 - 10 \times (6-1)^2 =$ 11 $= 20 - 8 + 2$ = 20 - 10 These shouldn'tt 20 - (8 + 2) or 20 12 a 25 b Exercise 1E 1 a i 12: 1, 2, 3, ii 10: 1, 2, 5, iii 13: 1, 13 an	(-4) 2 too e co (-4)	c 1 h 0 c 1 h 1 = 80 the 8 rrect a c 1 c 7 12 ame a and. If y cause 4 = 6 0 = 80 a Addi n Subt vo sep 5 - 2 b , 12 ar und 15 7; 1, 1	1 d i 7 d 3 i b $3 + 12$ instead of mswer is 9. 0 d 6 d 2 mswers chear you still are you have t b $3 + 12$ tion raction arate steps. y mistake. c -54 nd 18: 1, 2, : 1, 3, 5, 15 7	64 -5 6 -30 + (2 + 1) to the 15 29 6 e 8 ck both n cunsure a o work o 2 + (2	e 17) = 7 , then e $^{-5}$ f 5 nethods again, usk your teacher. ut the indices 1) = 7 as worked out 8
1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a $(6+4) \times 10 =$ c $100 - 10 \times (6 -$ 4 He has added the subtracted 10. Th 5 a 9 b -20 6 a -10 b -50 7 a 4 b 4 8 If you do not get the then check with a 9 No, he is incorrect first so $10 - 2^2 =$ 10 a $(6 + 2^2) \times 10 =$ c $10^2 - 10 \times (6 -$ 11 $= 20 - 8 + 2$ $\gamma =$ = 20 - 10 These shouldn'th 20 - (8 + 2) or $2012 a 25 bExercise 1E1 a i 12: 1, 2, 3,ii 10: 1, 2, 5,iii 13: 1, 13 aniv 36: 1, 2, 3,$	(-4) 2 too e co (-4)	c 1 h 0 c 1 h 1 = 80 the 8 rrect a c 1 c 7 12 ame a and. If y cause 4 = 6 0 = 80 a Addi n Subt vo sep 5 - 2 b , 12 ar und 15 7; 1, 1	1 d i 7 d 3 i b $3 + 12$ instead of mswer is 9. 0 d 6 d 2 mswers chear you still are you have t b $3 + 12$ tion raction arate steps. y mistake. c -54 nd 18: 1, 2, : 1, 3, 5, 15 7	64 -5 6 -30 + (2 + 1) to the 15 29 6 e 8 ck both n cunsure a o work o 2 + (2	e 17) = 7 , then e $^{-5}$ f 5 nethods again, isk your teacher. ut the indices 1) = 7 as worked out
1 a 4 b 23 f -5 g 3 2 a 25 b 10 f 9 g 16 3 a $(6+4) \times 10 =$ c $100 - 10 \times (6-4)$ 4 He has added the subtracted 10. Th 5 a 9 b -20 6 a -10 b -50 7 a 4 b 4 8 If you do not get the then check with a 9 No, he is incorrect first so $10 - 2^2 =$ 10 a $(6 + 2^2) \times 10 =$ c $10^2 - 10 \times (6-1)^2 =$ 10 a $(6 + 2^2) \times 10 =$ c $10^2 - 10 \times (6-1)^2 =$ 11 $= 20 - 8 + 2$ = 20 - 10 These shouldn'tt 20 - (8 + 2) or 20 12 a 25 b Exercise 1E 1 a i 12: 1, 2, 3, ii 10: 1, 2, 5, iii 13: 1, 13 an	(-4) 2 too e co (-4)	c 1 h 0 c 1 h 1 = 80 the 8 rrect a c 1 c 7 12 ame au and. If y cause 4 = 6) = 80 h Addi n Subt vo sep 5 - 2 b y , 12 ar nul 15 7; 1, 1 , 9, 12	1 d i 7 d 3 i b $3 + 12$ instead of inswer is 9. 0 d 6 d 2 n swers chear you still arear you have t b $3 + 12$ tion raction arate steps. y mistake. c -54 nd 18: 1, 2, ; 1, 3, 5, 15 7 , 18, 36 and	$ \begin{array}{r} 64\\ -5\\ 6\\ -30\\ +(2+1)\\ to the 15\\ 29\\ 6\\ e 8\\ ck both n\\ unsure a\\ o work o\\ +(2)\\ . Odaro h\\ 3, 6, 9, 1\\ 5\\ d 48: 1, 2 \end{array} $	e 17) = 7 , then e $^{-5}$ f 5 nethods again, sk your teacher. ut the indices 1) = 7 as worked out 8 4 , 3, 4, 6, 8, 12,

Answers for Student Book 7

115

ii 1,5 iii 1 **b** i 1, 2, 3, 6

iv 1, 2, 3, 4, 6, 12

v 1,5

c i

iii

2 a i

:.. 12

Multiples of 3	Multiples of 7
3	7
6	14
9	21
12	28
15	35
18	42
21	49
24	56
27	63
30	70

Multiples of 4	Multiples of 9
4	9
8	18
12	27
16	36
20	45
24	54
28	63
32	72
36	81
40	90
Multiples of 3	Multiples of 12
3	12
6	24
9	36

48 60

120

Multiples of 6	Multiples of 8	iv	Multip of 3
6	8		3
12	16		6
18	24		9
24	32		12
30	40		15
36	48		18
42	56		21
48	64	1	24
54	72		27
60	80	1	30

Multiples of 8	Multiples of 16		
8	16		
16	32		
24	48		
32	64		
40	80		
48	96		
56	112		
64	128		
72	144		
80	160		

b i 21 **ii** 36 **iii** 24 iv 12 **v** 16 3 180 cm 4 18 cm 5 a 408 **b** 1260 6 a 60 **b** 54 **b** 39 more years 7 a LCM c 52 years 9 a 7 **b** 4 c 12 10 a 20 **b** 36 c 8 11 60 12 30, 3150; 90, 1050; 150, 630; 210, 450

Exercise 1F d yes c yes b yes 1 a yes h yes g no f no e yes j yes i yes d no c yes b yes 3 a no f yes e no c yes b no 4 a yes c no b yes 5 a yes 6 02563, 46563 or 42163 7 a no **b** There is a decimal answer when you divide 8484 by 24 $\mathbf{c}_{-}6$ and 4 both have a common factor of 2 so it won't necessarily work when this is the case Exercise 1G **d** 13 **c** 11 b 9 1 a 7 c 64,8 **b** 49, 7 2 a 36,6 3 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225, 256, 289, 324, 361

4	a	8	b	1	с	10	
		20	e	15	f	2	
5	а	17	b	14	с	40	
-		60	е	90	f	18	
		19	h	80	i	30	

Exercise 1H

							-	
1	a	9	b	12	с	13	d	16
2	a	37	b	80	c	2	d	3
3	a	7 cm	b	15 cm	c	16 cm	d	17 cm

4 a 9^2 is a short way of writing 'nine times nine'.

- **b** The small raised 2 is called the power or index.
- c The symbol $\sqrt{}$ stands for the words 'the square root'.
- **d** The x^2 key on a calculator is pressed to find the square of a number.
- 5 The answer must be less than 5 as 17.5 is less than 25

					-							
6	b	etween 5	and	6, 5.2	23							
	b	etween 8	and	9, 8.8	33							
	b	etween 6	and	7, 6.0	55							
	b	etween 9	and	10, 9	.91							
7	a	$\frac{3}{5}$	b	$\frac{7}{10}$		c	3					
8	a	0.9	b	0.4		c	0.2					
E	xei	rcise 11										
1	a	27	b			c	1		d	5		
	e	64	f	1								
2	a	0.216	b	1.1		с	79.50	7	d	2.8		
3	a	2.9	b	1.6		с	39.3		d	3.0		
4	a	531.441	mm ³		b 0.3	43	m ³	с	4.91	3 cm	3	
5	a	4.9 cm	b	3.2 1	nm	с	0.8 m					
6	a	27	b	93								
7		must be s maller thar		er tha	n 2 as	the	cube 1	root	of 8	is 2 a	nd 7	7.8 is
8	Г	between 2	and	3, 2.	92	-						
	F	between 1	and	2, 1.	95							
		between 3										
9) 9	1	b	2		c	3					
-		4		3		e	10					

Exercise	1		
1 a -6	b 4 c -2		-75 f -84
2 a 8	b -4 c 1.	5 d -13 e	-2 f 90
3 a 14	b 4 c 8		100
4 a -12	b -12 c -2		-132
5 a -5	b -5 c -4		
6 a 27 There are on a cal	b ⁻ 4 c ⁻ 1 re multiple answe culator.		your teacher or check
8 a 24 f ⁻ 3		-27 d 8 32 i 4	
9 a 25	b -14 c	16 d 5	e 67
	worked out 49 – answer is 44.	8 – 3 instead of	
11 a 7	b 9 c 4		e 16.5 f 1
12 c i 4	ii 6	iii 12	
iv 1		vi 36	
13 b i 15		iii 24 vi 24	
iv 3			
	15 min 10 s	b 14	
	6, 7, 8 and 9		
16 a no	b yes	c no	
d yes	e no	100	IDO AGUNG
17 a 25	b 6	c 100 f 121	
d 13	e 1	1 121	
18 12 cm			1.2
19 a 27	b 2	c 5	d 3
20 a 20	b 9		
Check of	ut		
1 a -2		c 7	d 10
2 a ⁻ 12		c 15	S a 1 16
		c -6	d -6 e -4
3 a -5	b -5		
4 a 1			
5 a 4,80	b 9, 54		
6 a no	b yes	c yes	
7 a 11	b 13	c 15	d 9
8 a 5	b 2	c 1	d 3
	A CHE LIND TO	1 2 1 1	ACT STATIST

The homework book answers.

14			
1 a -3, -5, -7	b 2, -5, -12	c -16, -11, -6	5
2 a 2	b 1	c 0	d -2
	f 6	g -2	h -7
e 6 i -8	j -8	k -9	1 -27
m -13	n -17	o -13	p -12
	b 11	c 13	d 2
	f -6	g 0	h 3
e 2	j -2	k 23	1 -28
i -6	-	c 10	
4 a 1	b -5	f 49	
d -16	e 12	i -5	
g -6	h 0	c -9	
5 a 9	b -30		
d -5	e -26	f 24	
6 -1			
7 possible and	swer: -5, -2, -1,	1,4	
8 a 1,-13,-	5 b -12, -9, 5	c -1, 7, -4	
1B			
1 a -24	b -56	c -25	d -80
e -27	f -112	g -48	h -18
i -32	j -55	k -27	1 -80
2 a -24	b -30	c -12	
d -54	e -56	f -110	
3 0			
4 a 4	b -12		
	b -5	c -9	d -2
5 a -2 e -3	f -5	g -8	h -3
e -3 i -6	j -7	k -14	1 -15
6 a -4	b -8	c -4	d -5
-	b -12	c -18	d -2
7 a -3 e -2	f -5	g 3	h -15
	1 5		
10	h 0500	c 400	d 4
1 a 430	b 2500 f 4200	g 2	h 270
e 800	1 4200	5 -	
2 80 km			
3 \$60 000			
4 -300, -3			
-700, -7			
-40, -45			
600, 59	-48422		
5 0.01 cr	1		
1D	1 00	c 2	d 13
1 a 3	b 26 f 26	g -62	h -13
e 29 i -11 m 5	j 11	k 14	1 9
i -11 m 5	n 9	0 62	p 17
q 17	r -3		e DPB_15
2 a 14	b 9	c 27	d 10
e 24		g 280	h 6
i 48	0		
3 a 17		c 56	
d 46			
g -1	0 h 0	i 50	
The			
-2			

4 a $5 \times (6+7) = 65$	
b $(20 - 12) \div 4 = 2$	
c $12 \times (9 - 8) \times 2 = 24$	
d $(7 \times 2 - 10) \div 2 = 2$	
$(14-10) \div 2 = 2$	
f $(9+6) \times (8-5) = 45$	
1E	
1 2 12 16 20	b 7, 14, 21, 28, 35
1 a 4, 8, 12, 10, 20 c 10, 20, 30, 40, 50	d 12, 24, 36, 48, 60
e 17, 34, 51, 68, 85	f 25, 50, 75, 100, 125
- 10 01 26	b 28, 56, 84
15 00 125	d 42, 84, 126
	b 60, 120, 180
3 a 30, 60, 90 c 90, 180, 270	
4 a 1,7 b 1, 2, 5, 10	
c 1, 2, 4, 8, 16	
d 1, 2, 3, 4, 6, 8, 12, 24	
e 1, 2, 4, 7, 8, 14, 28, 56	
f 1, 2, 4, 5, 8, 10, 20, 40	
g 1, 2, 4, 8, 16, 32	
h 1,41	
i 1, 3, 7, 9, 21, 63	
j 1, 3, 5, 15, 25, 75	5 20 30 60
k 1, 2, 3, 4, 5, 6, 10, 12, 15 l 1, 2, 4, 8, 16, 32, 64	5, 20, 50, 00
	c 6 d 8
5 a 4 b 4 c 8 f 6	g 24 h 2
i 15 j 12	k 25 l 12
m 15 $n 5$	o 16 p 14
6 a 5 b 3	c 4 d 3
e 14 f 17	
7 a 6 b 10	c 12 d 18
e 12 f 20	g 15 h 25
i 30 j 56	k 28 1 30
m 99 n 72	o 35 p 36
8 a 12 b 120	c 210 d 30
e 56 f 90	
9 10.24 am	
1F	
1 a, d, e and h	
 2 b, e and h 3 b, c, e and h 	
3 b, c, e and h 4 a, b, d, f and h	
5 \mathbf{a} , \mathbf{d} and \mathbf{g}	
6 a, b, c and g	
0	digit – middle digit. If the answer
is 0 or 11 then the original	number is divisible by 11.
1G-1I	
1 a 5 b 9	c 4 d 17
2 a 4 b 9	c 49 d 225
e 4 f 9	g 49 h 225
3 a 6 b 8	c 10 d 12
e 11 f 3 i 5 i 7	g 6 h 5
i 5 j 7 m 10 n 10	k 8 l 4 o 3 p 3
4 a 9 cm b 13 cm	• • • • •
5 a 3 b 2	c -4 d -10
6 a 1.728 b 15.625	c -226.981 d -0.027
e 4.2 f 0.7	g 16 h 2.4
7 a 19.683 b 3.1	

