SOLUTIONS
IGCSE CORE – Types of number

JUNE 05 P1

6	(a) 12 only (b) 3 only	1 1	

NOV 05 P1

4	√5	1	

NOV 05 P1

10 (a) (b) (c)	61 or 67 63 64	1 1 1	

NOV 06 p1

1 (a) (i)	√35	1	
(ii)	3	1	
(iii)	45	1	
(iv)	2 or 3 or 37	1	accept any combination
(v)	2	1	
(vi)	24	1	

May 06 p1

4	(a)	7	1
	(b)	Any multiple of 70 (e.g. 490)	1

IGCSE CORE – ERROR IN MEASUREMENT

JUNE 05 P1

9	255 ≤ weight < 265	2	1 mark for each. Allow 255.0 and 265.0 SC1 for fully correct but reversed

NOV 05 P1

3	6950	1	

May 06 p1

7	345000 355000	1, 1

NOV 06 p1

14	15.55 (≤ length <) 15.65	2	1 mark for each. SC1 for fully correct but reversed.

CORE IGCSE - SEQUENCES

JUNE 05 P1

16	(a) 23 isw (b) 43 (c) $4n + 3$ oe final answer	1 1ft 1 14	ignore extras even if incorrect their (a) + 20 allow any unsimplified form e.g. $7 + (n - 1) \times 4$ or $7 + 4n - 4$

NOV 06 p1

4	18	1

NOV 05 P3

8 (a)	correct diagram			
(b)	13 16 19	2	1 for 2 correct	
(c)	298	2	M1 for evidence of a correct method	
(d)	$3n + 1$	2	1 for $3n + k$	
(e)	28	2	M1 for evidence of a correct method	[9]

May 06 p3

4 (a)	16 , 21 , 26	3	1 , 1 , 1	
4 (b)	101	2	M1 for 5 x 20 + 1 soi.	
4 (c)	5n +1	2	SC1 for 5n + k seen	
4 (d)	37	2	M1 for -1 then /5 or SC1 ft from (c) = 186 correctly solved.	9

NOV 06 p1 - Sequences

(b) (i)	Correct arrangement of triangles drawn.	1	accept if only 1 internal line missing
(ii)	16 25 36	2	1 mark for 2 correct
(iii)	10000 or 1×10^4	1	Not 100^2
(iv)	n^2 or $n \times n$	1	accept $t = n^2$ etc. do not accept x^2
(v)	Square (numbers)	1	accept squares, squared

IGCSE CORE – ROUNDING, ESTIMATING AND USING A CALCULATOR

JUNE 05 P1

1	1393000	1	Allow 1393000.0 or 1.393×10^6

JUNE 05 P1

19	(a) (i) $\frac{9-3\times 2}{3}$ (ii) (equals) 1 (b) 1.01	1 1ft 1	allow slip of denominator as 3.0 or 3.00 (not allow zeros in other figures) their **(a)(i)** provided order of operation is as seen and both **(a)(i)** and **(a)(ii)** are to a maximum of 1dp apart from zeros

NOV 05 P1 –

15 (a) **(b)(i)** **(ii)**	0.5 not 0.50 10 – 6 x c's 0.5 = 7 7.0908	**1** **1f.t.** **1**	 Only f.t. c's **(a)** if it is 0.4 (0) or 0.50 or 0 Allow 7.6 or 8 from 0.4

May 06 p1

5	2.71(4....)	2	**M1** for attempt at cube root of 20

May 06 p1

6 (a) **(b)**	0.075976(....) 0.076	1 1 f.t.	 f.t. candidates **(a)**

NOV 06 p1

9	(a) 79507 (b) 80000	1 1ft	 ft provided (a) $\geq$ 500 and not a multiple of 1000.

NOV 06 p1

22	(a) $\frac{10+20}{5-(20\div 10)}$ (b) 10 cao. (c) 9.49 cao.	2 1 2 17	SC1 for 3 or 4 of the numbers given to 1 significant figure. B1 for 9.485(5)... to 9.493 seen. (Allows for 22 ÷ 13 rounded to 3sf) If zero, SC1 for 9.5www as final answer (Not 9.50 but check for possible B1)

IGCSE CORE – FRACTIONS

JUNE 05 P1

15	(a) multiple of 24 (b) $\frac{11}{24}$	1 2	ignore extras if lowest correct M1 for a correct attempt at two equivalent fractions (e.g.. $\frac{5\times8}{48}$ and $\frac{3\times6}{48}$ seen or better) ww. and decimals alone zero

NOV 05 P1

6	12	2	SC1 correct method seen $1\frac{1}{2}\div\frac{1}{8}$ or better.

NOV 06 p1

10	$\frac{6}{10}$ $\frac{33}{50}$ $\frac{2}{3}$	2 15	SC1 for reverse order. M1- at least 2 fractions correctly compared in the same form. (decimal, percentage or common denominator)

IGCSE CORE – NUMBER CALCULATIONS AND TIME

JUNE 05 P1

18	2.45	3	B1 for 1.20 or 1.35 seen. (or 120 or 135) M1 for 5 – their (1.5 × 0.8 + 3 × 0.45) or 500 – their (1.5 × 80 + 3 × 45)

MAY 05 P3

1	(a)		2.8	1	ignore minus sign, accept 2800 g	
	(b)		106.5(0)	1	107 is X (but remember to look back for 106.5)	
	(c)	(i)	10 40	1	accept 10.40, 10:40, 10.40 am	
		(ii)	1 (hour) 30 (mins)	1 f.t.	f.t. from (c)(i) [f.t. is (c)(i) > 12 10] accept 1 ½ (hours), 1.5 (hours), 90 (mins)	
	(d)		13.55	1	accept 1.55 (pm) but 01 55 and 1.55 am are X	

NOV 05 P1

19 (a) (b) (c)	29.25 or 29.2 or 29.3 18 Their (a) ÷2.20 14	1 1 M1 A [16]	Implied by 13.3 or 13.2 (...) seen

May 06 p1

14	(a)	6 (h) 50 (min)	1	
	(b)	37.5 (%)	2	B1 for 9 (hours) seen or M1 for c's 9 ÷ 24 x 100

IGCSE CORE – STANDARD FORM

JUNE 05 P1

20	(a) Panama, (Guyana), Colombia, Brazil	1	allow figures if correct
	(b) 5	2	M1 for $(1.14 \times 10^6) \div (2.15 \times 10^5)$ implied by figs 53(0……)

NOV 05 P1

1	$1.01(00) \times 10^4$	1	

NOV 06 p1

13	3.51×10^{-3}	2	B1 for figures 351 seen

May 06 p1

20	(a)	1.13×10^6	2	**M1** for 2000 x 565 seen or **B1** for figs 113
	(b)	$4.42(\ldots.) \times 10^{-2}$	3	**M1** for 25 ÷ 565 soi and **B1** for figs 442(….)
			10	

IGCSE CORE – DIRECTED NUMBERS

May 06 p1

1	–27	1	

MAY 05 P3

3	(a)	(i)	–3 9	1 1		
		(ii)	9	1	ignore minus sign	
	(b)		correct max drawn correct min drawn	1 f.t. 1 f.t.	} f.t. is from **(a)(i)** [Sunday] } allow Sunday (only) to be 1 square out horizontally } allow freehand straight lines	
	(c)	(i)	3	1 f.t.	f.t. is 3 if Sunday negative otherwise 2 allow 3 out of 7	
		(ii)	Sunday	1 f.t.	f.t. if not Sunday is Thursday	

NOV 05 P1

7	(a)	10 (allow –10)	1	
	(b)	12	1	

NOV 06 p1

1	–13.1	1	

IGCSE CORE – ORDERING FRACTIONS, DECIMALS AND PERCENTAGES

NOV 05 P1

9 (a)	$\frac{7}{100}$	1	Allow 0.07 or 7%
(b)	72%	1	Allow 0.72 or $\frac{72}{100}$
(c)	0.072 and 7.2%	1 [15]	In this form.

May 06 p1

2	0.09 9% $\frac{9}{100}$	1	

IGCSE CORE – SYMBOLS, POWERS AND ORDER OF OPERATIONS

NOV 05 P1

14 (a)	>	1	
(b)	<	1	
(c)	<	1 [15]	

NOV 06 p1

12	B (and) D	1,1	Either way round. -1 each extra letter.

NOV 06 p1

2	$2 \times (3 - 4) + 5 = 3$	1	& no other brackets