

Stage 6: Got It?

Markscheme

Abbreviations

A: Answer mark

M: Method mark

oe: or equivalent

Unless stated otherwise a correct answer with no working gains all marks

A correct answer with alternative correct working gains all marks

A correct answer with incorrect working does not gain the relevant M mark(s)

Q			Answers	M	Notes and alternatives
1	a	i	2 620 260	A1	
		ii	2 602 206	A1	
		iii	2 600 216	A1	
b	i	Two million, three hundred and forty three thousand, eight hundred and seventeen	A1		
	ii	Four million, three hundred thousand, eight hundred and seventeen	A1		
	iii	Three million, three hundred thousand and seven	A1		
2	a		3 565 460	A1	
	b		3 565 500	A1	
	c		3 565 000	A1	
	d		3 570 000	A1	
	e		3 600 000	A1	
	f		4 000 000	A1	
3	a		13	A1	
	b		-2	A1	
	c		-12	A1	
	d		-3	A1	
	e		-14	A1	
	f		12	A1	
4	a		-15	A1	
	b		-24	A1	
5	a		32 895	A3	Award M2A0 for attempt at using long multiplication (see National Curriculum Appendix) with one arithmetical error; M1A0 for two arithmetical errors
	b		157 115	A3	
6	a		165.1	A2	Award M1A0 for attempt at using short or long division (see National Curriculum)

					Appendix) with one arithmetical error
	b		$78 \frac{7}{12}$	A2	Award M1A0 for attempt at using short or long division (see National Curriculum Appendix) with one arithmetical error Award M1A0 for '78.6' or '78 r 7'
7			Evidence of short or long division being correctly used 38.90625.... 39	M2 A1 A1	Award M1A0 for attempt at using short or long division (see National Curriculum Appendix) with one arithmetical error
8	a		Evidence of ' 6×4 ' oe 2400	M1 A1	
	b		Evidence of ' 12×7 ' oe 84000	M1 A1	
	c		Evidence of partitioning 280 (eg $270 + 12$) oe 94	M1 A1	
	d		Evidence of ' $32 \div 8$ ' oe 40	M1 A1	
9	a		Factors of 40 and 24 listed 8	M1 A1	
	b		First few multiples of 8 and 20 listed 40	M1 A1	
	c		97	A1	
10	a		Evidence of ' $(2 \times 5 =) 10$ ' oe 14	A1 A1	
	b		Evidence of ' $(5 \times 4 =) 20$ ' oe 22	A2	
	c		Evidence of ' $(60 \div 6 =) 10$ ' oe 8	A2	
	d		Evidence of ' $(6 \div 2 =) 3$ ' oe 57	A1	
11	a		1327 or 2167	A1	
	b		No '1747 could be the smaller or larger number of the pair' oe	A1 M1	Award A0M0 for a response of 'no' with no justification
12			'Evidence of 17205' 'Evidence of ' $\times 15$ ' 258 075	M1 M1 A1	
13			Yes Evidence of '100 000' and '40 000'	A1 M1	Award A0M0 for a response of 'yes' with no justification

14	a	$1/2$	A1	
	b	$1/4$	A1	
	c	$1/3$	A1	
	d	$3/4$	A1	
	e	$3/8$	A1	
15		$1/5, 7/20, 4/10, 1/2, 8/8, 5/4$	A3	Award A2A0 if one fraction in incorrect relative position and all others correct. Award A1A0A0 for largest and smallest fractions in correct position and more than one in incorrect relative position. Award A2 for correct descending order
16	a	$4/8 + 1/8$ oe	M1	
		$5/8$	A1	
	b	$8/12 + 3/12$ oe	M1	
		$11/12$	A1	
	c	$14/20 - 5/20$ oe	M1	
	$9/20$	A1		
d	$19/4 - 1/8$ oe	M1		
	$38/8 - 1/8 = 37/8$ oe	M1		
	$4^{5/8}$	A1		
17	a	$1/8$	A1	
	b	$2/12$	M1	
		$1/6$	A1	
c	$6/50$	M1		
	$3/25$	A1		
18	a	$1/6$	A1	
	b	$1/6$	A1	
	c	$6/30$ or $1/5$	A1	
19		$2/3$	A1	
20	a	23	A1	
	b	0.14	A1	
	c	0.123	A1	
	d	5500	A1	
	e	47	A1	
	f	0.56	A1	
	g	4500	A1	
	h	100	A1	
21	a	0.8	A1	
	b	Evidence of the digits '7' and '5'	M1	
		7.5	A1	
c	Evidence of the digits '1', '5' and '3'	M1		
		15.3	A1	

22			117.95	A4	Award M1A0 for attempt at using short or long division (see National Curriculum Appendix) with one arithmetical error Award M1A0 for '117' Award M1A1 for '117 r 20' oe
23	a		Evidence of ' $550 \div 6$ ' oe Evidence of '91.66666666...' oe £91.67	M1 M1 A1	
24			Matt ' $\frac{2}{5}$ is 40% which is less than 42%' oe	A1 M1	Award A0M0 for a response of 'Matt' with no justification
25			Evidence of ' $\pounds 60 \div 4$ ' oe John £45 Jean £15	M1 A1 A1	
26			Evidence of finding 10% oe 45	M1 A1	
27			'Evidence of ' $\div 4$ ' oe 4cm	M1 A1	
28			Evidence of ' $\frac{1}{5} = 15\text{cm}$ ' oe Evidence of ' 15×5 ' oe 75	M1 M1 A1	
29			Evidence of substituting '10 and '15' into the formula oe Evidence of substituting ' 2×25 ' oe 50	M1 M1 A1	
30	a		14 17	A1	
	b		8 5	A1	
	c		16 32	A1	
	d		20 27	A1	
31			$4n + 5 = 17$	A1	
32			0, 25 1, 24	A3	Award A2 for 8 correct pairs

		2, 23 3, 22 4, 21 5, 20 6, 19 7, 18 8, 17 9, 16		Award A1 for 4 correct pairs
33		e.g. <i>using whole numbers:</i> 0, 4 1, 3 2, 2 3, 1 4, 0	A2	Solutions could include fractions and decimals. Award A1 for 3 correct pairs
34		Evidence of '1.6 + 0.85 + 2.12' oe 5.43 or 5430 km or m	M1 A1 A1	
35	a	F	A1	
	b	T	A1	
	c	F	A1	
	d	T	A1	
	e	F	A1	
	f	F	A1	
36	a	8	A1	
	b	25	A1	
37		T Example given such as rectangles with dimension 10×4 ($A = 40$, $P = 28$) and 20×2 ($A = 40$, $P = 44$)	A1	Award A0 for 'T' with no explanation
38		Evidence of using two rectangles to calculate the compound area $12 \times 20 - '4' \times 15$ or $'5' \times 12 + 8 \times 15$ or $8 \times 20 + '4' \times '5'$ 180	M1 M1 A1	
39	a	32	A1	
	b	48	A1	
	c	54	A1	
	d	20	A1	
40		Evidence of volume of cuboid A being calculated as 216m^3 Evidence of volume of cuboid B being calculated as 240m^3 Cuboid B	M1 M1 A1	
41		8cm drawn accurately ($\pm 2\text{mm}$) 5cm drawn accurately ($\pm 2\text{mm}$) 50° drawn accurately ($\pm 5^\circ$)	A1 A1 A1	

42	a	Cube	A1		
	b	Cuboid	A1		
	c	Square based pyramid	A1		
	d	Triangular Prism	A1		
43	a	Evidence of '180 – 82 – 34' oe 64°	M1 A1		
	b	Evidence of '180 – 90 – 42' oe 48°	M1 A1		
	c	Evidence of '180 – 75 – 75' oe 30°	M1 A1		
	d	120°	A2		
44	a	Radius Diameter Circumference	A1 A1 A1		
	b	Diameter Radius	A1		
45	a	29°	A1		
	b	Evidence of '360 – 90 – 210' oe 60°	M1 A1		
	c	Evidence of '180 – 150' oe 30°	M1 A1		
46		A (-2, 2) B (1, 3) C (3, 2) D (-2, -2) E (0, -1) F (2, 0) G (2, -3)	A1 A1 A1 A1 A1 A1 A1		
47	a	(-2,1)	A1		
	b	(1,-5)	A1		
48	a	180° 45° 90° 45°	A2	Award M1A0 for 2 correct angles	
	b	Accept 15 or 14	A1		
49	a	Evidence of '20 ÷ 5' 4	M1 A1		
	b	Any four numbers with a sum of 24 such as 4, 5, 6, 9	A2		
		Total marks	193		