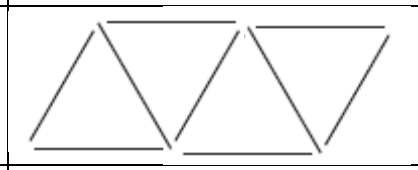
Year 8 Assessment 2 Mark Scheme

Question	Answer	Mark	Notes
1	122	1	cao
2	124	1	cao
3	459	1	cao
4(a)	$\frac{21}{250}$	(1) 2	M1 for $\frac{84}{1000}$ oe cao FT their fraction providing it can be simplified
4 (b)	0.625	1	cao
4 (c)	72	2	M1 18 × 4 oe
5(a)	64	1	cao
5 (b)	2	1	cao
5 (c)	16	1	cao
6	189	(1) 2	For a correct method to find 35% or 135% of 140 e.g. 35/100 x 140 or (35% =) 49 seen cao
7 (a)	$\frac{7}{100}, 0.12, 0.25, \frac{2}{5}, \frac{15}{20}$	(1) 2	For any two correct conversions between FDP. cao condone equivalent values
8	30	(1) 2	For the difference of 18 seen or $\frac{78-60}{60}$ cao
9	13608	(1) 2	For an appropriate method of multiplication with no more than one numerical error, but not a place value error in a formal method of multiplication. cao

10	0.08	1	oe
11 (a)	$\frac{1}{5}$ oe	(1)	For a fraction equivalent to 0.2
	5	2	cao
11 (b)	$\frac{3}{4}$ oe	(1)	For $\frac{4}{3}$ seen or oe
		2	cao
12		1	cao
13 (a)	23, 26	1	cao
13 (b)	3n + 5	(1)	for 3n seen
		2	cao
13 (c)	Valid reason	1	Eg It's the 20th (term) 3 × 20 + 5 Listing all the terms up to 65 with no errors
14	13	1	cao
15	$9x + 7$	1	For $4x + 12$ or $5x - 5$
		(2)	cao
16 (a)	Adam = 20 , Cameron = 35	(1)	15 ÷ 3 (= 5) or 35 or 20 seen
		2	Correct answer only.
16 (b)	$\frac{20}{55}$ or equivalent	1	oe FT their answer where $\frac{\text{Adam}}{\text{Total}}$

17	Sam with working	(1) 2	Either $(\frac{159}{300} =)\ 53\%$ or $\left(\frac{13}{25} =\right) 52\%$ or a pair of fractions with common denominators with at least one numerator correct. Sam with fully correct percentages. (award 0 marks if no working shown)
18 (a)	$\frac{120}{480}$	(1) (1) 3	480 ÷ (3+5) or 60 or 180 or 300 "180" × 0.5 or 90 or "300" ÷ 10 or 30 or 120 oe
19	1 : **1.5**	1	1.5 oe
20 (a) 20 (b)	26 1 or 64	(1) 2 1	List of at least three square or three cube numbers seen, or 25 and 27 seen. cao cao
21	3	(1) 2	For attempt to start process of prime factor decomposition. Accept $2^3 \times 7$
22	3	(1) 2	For A = 6 or B = 2 (can be implied by working ie 6 + 2 = 8 or 6 – 2 = 4) cao
23	70	(1) 2	For 80% seen or attempt to divide 56 by any factor of 80 (except 1) or 56/0.8 cao

Extension Questions

Q1

Q	Answer	Mark	Comment
	17	(1) 2	For noting this is pattern 6 OR for a clear list of numbers of hexagons 4, 9, 14, 19, 24, 29, ... OR for white and grey: white: 2, 5, 8, 11, 14, 17, ... grey: 2, 4, 6, 8, 10, 12, ... cao

Q2

Q	Answer	Mark	Comment
a	$n = 5: 4 \times 5^2 = 100$ $n = 20: 4 \times 20^2$ $= 1600$	1 1	
b	−29 and −42	(1) 2	3, −2, −9, −18, **−29**, **−42** First differences: −5 −7 −9 **−11** **−13** Second differences: −2 −2 **−2** **−2** (for finding second differences, even if incorrect)

Q3

Q	Answer	Mark	Comment
	2.48×10^{-3}	1	cao

Q4

Q	Answer	Mark	Comment
a	30 : 42 : 7	(1)	Multiply to create a common value for b
		2	oe
b	42/79	1	cao