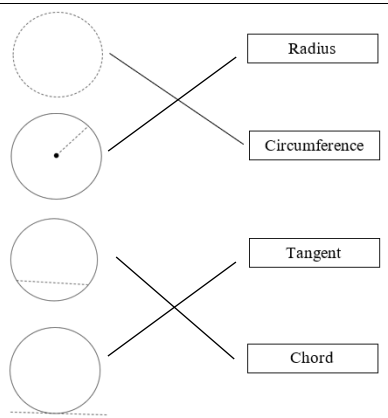
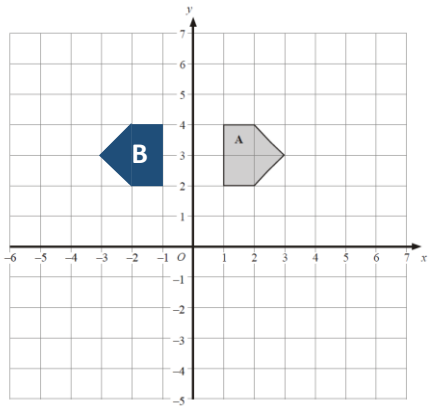
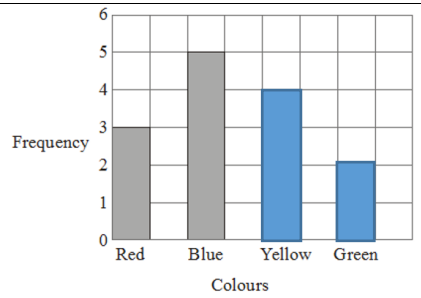
Year 7 Summer Assessment CALCULATOR Mark Scheme

Question	Answer	Mark	Notes
1 (a)	-9, -5, 0, 2, 3	1	cao
1 (b)	0.519, 0.6, 0.608, 0.64	1	cao
2 (a)	False	1	cao
2 (b)	True	1	cao
2 (c)	False	1	cao
3 (a)	5	1	cao
3 (b)	4	M1 A1	For intention shown to subtract 5 from each side. cao
4 (a)	3.5	1	cao
4 (b)	3.8	M1 A1	For 38 seen or 'their total' ÷ 10 oe
4 (c)	4	1	cao
5 (a)	3	1	cao
5 (b)	17	B2 B1	cao For either $16 \div 2 = 8$ or $3^2 = 9$ (1 mark for 8 or 9 seen)
6	3	1	cao

7		B2 B1	All three diagrams correctly matched For 1 or 2 correct matches (do not include the one already given)
8 (a) 8 (b)	0.5 or equivalent 3	M1 M1 A1 M1 M1 A1	For correctly expanding the bracket (indep) for isolating x's in their equation eg $4x = 14 - 12$ or better oe For collecting x on the same side eg $13x - 8x - 3 = 12$ oe or show intent to add 3 to both sides eg $13x = 8x + 12 + 3$ oe For isolating x's eg $13x - 8x = 12 + 3$ or better cao

9		B2 B1	cao For a correct reflection in the x axis or For a correct reflection in the line $x = a$ where $a \neq 0$
10	52.5cm^2	B1 A1 B1	Substitution into area of a trapezium formula. $(\frac{1}{2}(5 + 10) \times 7)$ 52.5 cm^2
11 (a) 11 (b)	25.1 Correct explanation	M1 M1 A1 1	D = 8cm (may be seen on diagram) For π × 8 oe cao A correct explanation that recognises the method does not include ÷2 eg accept She didn't half it/the circumference There should be ÷2 It should be π × 5 (bod) Do **not** accept It's not a full circle She used a full circle The correct answer is 25.(…)
12	12	M2 (M1) 3	For 20 × 3 = 5T oe or 60 ÷ 5 For a correct substitution eg $20 = \frac{5T}{3}$ oe cao

13 (a)		1	cao
13 (b)	Blue	1	cao
13 (c)	14	1	cao
13 (d)	$\frac{3}{14}$	(1) 2	for $\frac{3}{their\ answer\ to\ part\ (c)}$ cao
14 (a)	1	1	cao
14 (b)	1.5	M1 M1 A1	For at least two multiplications calculated correctly to find fx (0 × 7 = 0) or (1 × 15 = 15) or (2 × 13 = 26) or (3 × 2 = 6) or (4 × 2 = 8) or (5 × 1 = 5) For "60" ÷ 40 cao
15	3.4	M1 A1	For 21.36 ÷ π or 21.36 ÷ 3.1(….) Answer in the range (3.3 to 3.45)
16	187	M1 M1 A1	For a method to find a missing length, 15 – 7 (= 8) or 22 – 9 (= 13). (may be seen on diagram) For method to find the area of the triangle. E.g. ((15 – 7) × (22 – 9)) ÷ 2 (= 52) Or to find the area of the rectangle, e.g. 9 × 15 (= 135) Cao

Extension Questions

1	132	M1 M1 A1	For use of (n – 2) × 180 seen, (6 – 2) × 180 = (720) or (5 – 2) × 180 = 540 or for use of 360 ÷ n to find exterior angle, 360 ÷ 6 = (60) or 360 ÷ 5 = (72) For method to find the size of one interior angle, 720 ÷ 6 = (120) or 540 ÷ 5 = (108) or 180 – 60 = (120) or 180 – 72 = (108) Cao Note: accept any correct full alternative method.
2	$\frac{29}{30}$	M1 M1 A1	$\frac{6}{20}$ oe Finding a common denominator eg $\frac{40}{60} + \frac{18}{60}$ $\frac{29}{30}$ oe
3	Décor U	M1 M1 M1 A1	For a process to find an area e.g 4 × 9 For a process to find the number of tins for one store, e.g. 36 ÷ 12 or 36 ÷ 10 For a process to find the costs for both e.g “3” × £3.70 and “4” × £3.00 where the number of tins is an integer States Décor U, giving costs of £11.10 and £12