Paper 1MA1: 3F			
Question	**Working**	**Answer**	**Notes**
1		4.5	B1 cao
2		$\frac{19}{100}$	B1 cao
3		even mult of 7	B1 for an even multiple of 7
4		parallelogram	B1 for parallelogram drawn
5		60	B1 cao
6 (a)		3	P1 start of process eg 8×2×28 (= 448) P1 eg '448' ÷ 200 (= 2.24) or build up method A1 cao
(b)		No change with reason	P1 process to evaluate effect of 2.5g C1 explanation that number of jars is unchanged
7		1,3,9 or 2,6,9 or 2,3,6 or 2,3,18 or 2,9,18	M1 3 factors of 18 or 3 numbers with prime total A1 eg 2, 3, 6
8		34	M1 for first step in process eg 17×200 (= 3400) A1 cao

Paper 1MA1: 3F			
Question	**Working**	**Answer**	**Notes**
9 (a)		4.6	B1 cao
(b)		4.8025	B1 for 2.7 or 2.1025 (implied by answer of 4.8025) B1 cao
10 (a)		56	B1 cao
(b)		32	B1 cao
(c)		Reason	C1 starts argument eg 8 cars or 8/27 C1 completes argument eg with 1/3 = 9/27
11		60 litres with evidence	M1 reads from graph, eg 30*l* = 6.6 gals or 6 gals = 27*l* C1 60 litres with sufficient evidence
12		2.70	P1 start of process 1.95×3 (= 5.85) P1 complete process eg (6.93 – '5.85') ÷ 0.4 A1 cao
13 (a) i		115	B1 cao
ii			C1 angles in a triangle add to 180
(b)		100	P1 complete process to find *y* ft from (a) A1 for 100 or ft from (a)

Paper 1MA1: 3F			
Question	**Working**	**Answer**	**Notes**
14 (a)		9	M1 for – 12 and ÷ 7.80 A1 cao
(b)		$T = 7.8y + 12$	C1 for $7.8y + 12$ or T = linear expression in y C1 $T = 7.8y + 12$ oe
15 (a)		$\frac{20}{35}$	B1 $\frac{20}{35}$ oe
(b)		3 : 4	M1 15 : 20 A1 cao
16 (a)		No and reason	C1 No and reason eg the mean must be less than 6
(b)		explanation	C1 Should have divided by 30, not by 6
17		Sophie and correct values	P1 process leading to two comparable values eg 75÷15×8 (= 40) or 56÷100×75 (=42) oe P1 complete process leading to 3 comparable values C1 correct deduction with correct comparable values
18		explanation	C1 'The bearing is 335°' or 'She should have measured clockwise from north' oe
19 (a)		0.05	B1 cao
(b)		24	M1 for 120 × 0.2 oe A1 cao

Paper 1MA1: 3F			
Question	**Working**	**Answer**	**Notes**
20 (a)		diagram	C1 line drawn from –2 to 3 C1 cao
(b)		$y < 2.25$	M1 for clear intention to subtract 7 from both sides of inequality or equation or divide all terms of inequality or equation by 4 or $4y < 9$ or 2.25 oe A1 $y < 2.25$ oe as final answer
21		$4n - 7$	M1 method to deduce nth term e.g. $4n + k$ A1 for $4n - 7$ oe
22		171	P1 for process to find one share P1 for process to find total A1 cao
23		plan	C1 a partially correct plan C1 correct plan
24		$t = 3(y + 2a)$	M1 adding $2a$ to both sides or multiplying each term by 3 A1 $t = 3(y + 2a)$ or $t = 3y + 6a$
25		$7.15 \leq x < 7.25$	B1 for 7.15 and 7.25 B1 cao

Paper 1MA1: 3F					
Question		**Working**	**Answer**	**Notes**	
26	(a)		improvement	C1	appropriate improvement eg do not have axes starting at (0, 0)
	(b)		explanation	C1	explanation eg pine cone has a very short width for its length
27	(a)		1.95	M1 M1 A1	method to find one temperature eg 4500 ÷ 1200 for complete method cao
	(b)		D	B1	cao
28			complete chain of reasoning	C1 C1 C1	starts chain of reasoning eg finds area of large square and area of triangle or use of Pythagoras for $(x + y)^2 - 4\times (x\times y\div 2)$ oe or $\sqrt{x^2 + y^2} \times \sqrt{x^2 + y^2}$ complete chain of reasoning with correct algebra

Paper 1MA1: 3F			
Question	**Working**	**Answer**	**Notes**
29 (a)		36.4	P1 start process eg method to find area of trapezium P1 complete process to find volume of tank P1 process to find time eg volume × 1000 ÷ 300 P1 process to find 85% of volume or of time A1 for 36.4 or 36 mins 24 secs
(b)			C1 explanation eg if the average rate was slower it would take more time, if the average rate was faster it would take less time
30		48	P1 process to start solving problem, eg forms an appropriate equation P1 complete process to isolate terms in x A1 for $x = 6.5$ oe B1 ft (dep P1) for correct perimeter for their x