Paper 1MA1: 2F			
Question	**Working**	**Answer**	**Notes**
1		6.66	B1 cao
2		0.4375	B1 cao
3		27 or 64	B1 cao
4		7.3225	M1 for 5.5225 **or** 1.8 A1 cao
5		⅔	B1 oe
6		eg. 1, 2, 18	P1 Starts process eg. Lists at least 2 multiples from 9,18,27,36,45 **or** lists at least 2 factors from 1, 2, 4, 5, 8, 10, 20, 40 P1 Continues process eg. gives a set of numbers whose sum is greater than 20 but less than 30 but numbers may not all be appropriate factors/multiples A1 Gives 3 numbers that meet all the criteria

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Question	**Working**	**Answer**	**Notes**
7		$\frac{53}{64}$	P1 for interpreting information e.g. recognising that the shaded area = $\frac{3}{4}+\left(\frac{1}{4}\times\frac{1}{4}\right)+\left(\frac{1}{4}\times\frac{1}{4}\times\frac{1}{4}\right)$ or adding in lines to diagram to show 64ths A1 cao
8			C1 Any one correct statement eg. No key, *y* axis label, 4 missing on *y* axis C1 Any 2nd correct statement C1 Any 3rd correct statement
9		13	M1 Puts numbers in order or clear attempt to find 5th number **or** (9 + 1)/2 **or** selects 11 A1
10 (a)		$p + c$	B1
(b)		$\frac{14}{3}$	M1 adds 5 to both sides of equation A1 oe
11 (a)		eg. $2 \times 5 = 10$	B1 example given
(b)		explanation	P1 two prime numbers identified C1 conclusion which also shows at least one calculation with prime numbers or identifies one of the prime numbers as 2.

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Question	**Working**	**Answer**	**Notes**
12 (a)		graph	C1 introduce a scale for the *y* axis C1 plots at least 2 points correctly C1 fully correct and complete graph
(b)		15 miles (supported)	M1 reads off graph eg 20 km = 12-13 miles or 15 miles = 24 km or uses table C1 states 15 miles (24 km) with appropriate evidence
13		shown	B1 $ABC = 80$ M1 $180 - 80° - 50°$ A1 $ACB = 50$ C1 statement that since $ACB = CAB = 50°$ with reasons eg Vertically opposite angles are equal, Angles in a triangle add up to 180^o, The exterior angle of a triangle is equal to the sum of the interior opposite angles; Base angles of an isosceles triangle are equal.
14		13.9	P1 finds the volume of a cuboid eg 50×40×60 (=120000) P1 finds 35% of the oil from the cuboid eg 120000 × 0.35 oe (=42000) P1 removes 35% of oil from cuboid eg 120000 – 42000 (=78000) P1 division to find missing side length eg 78000÷(80×70) or 13.928... A1 for answer to an appropriate degree of accuracy eg (13.9 or 14 or 10)

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Question	**Working**	**Answer**	**Notes**
15		22.5	M1 interpret information eg use the scale A1
16		12	M1 Starts to list factors of writes at least one number in terms of prime factors **or** identifies a common factor other than 1 A1 cao
17	£ per kg: 1.89÷2 = 0.945 (94.5); 4.30÷5 = 0.86 (86); 8.46÷9 = 0.94 (94) kg per £: 2÷1.89 = 1.058(2..) ; 5÷4.30 = 1.162(79…); 9÷8.46 = 1.0638(297…) Price per 90 kg: 1.89×45 = 85.05; 4.30×18 = 77.4(0); 8.46×10 = 84.6(0)	5 kg (supported)	P1 for a process (for at least two boxes) of division of price by quantity or division of quantity by price or a complete method to find price of same quantity or to find quantity of same price P1 for a complete process to give values that can be used for comparison of all 3 boxes C1 for 5 kg and correct values that can be used for comparison for all 3 boxes and a comparison of their values
18		11	M1 process of substitution demonstrated eg 5×3 + 2×−2 A1 cao

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Question	**Working**	**Answer**	**Notes**	
19		720	P1	attempt to find the maximum biscuits for one of the ingredients e.g. 5000 ÷ 15 (=33.3..) or 2500 ÷ 75 (=33.3..) or 3000 ÷ 100 (=-30) or 320 ÷10 (=32)
			P1	for identifying butter as the limiting factor or 30 × 24 (=720) seen
			A1	
20 (a)		$3(f + 3)$	B1	cao
(b)		$(x - 5)(x + 3)$	M1	for $(x \pm 5)(x \pm 3)$
			A1	cao
21		$p=qr-sr$	M1	for multiplying all 3 terms by r or isolating p/r term
			A1	oe
22 (a)		90	P1	for the process of finding an area eg 6×11 (=66)
			P1	(dep on area calculation) for the process of working out the number of tins eg "66" ÷ 12 (=5.5 or 6 tins)
			P1	for the process of working out the cost eg "6" tins × £15
			A1	cao
(b)		reason	C1	she might need to buy more tins

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Question	**Working**	**Answer**	**Notes**			
23		96	P1	a strategy to start to solve the problem eg 18 ÷ (7 −4) (=6)		
			P1	for completing the process of solution eg "6" × (4 + 5 + 7)		
			A1	cao		
24		20.9	M1	correct recall of appropriate formula eg $\sin x = \frac{5}{14}$		
			A1	for 20.9(248…)		
25 (a)		$4n+2$	M1	start to deduce nth term from information given eg $4n+k$ where $k \neq 2$		
			A1	cao		
(b)		No (supported)	M1	start to method that could lead to a deduction eg uses inverse operations		
			C1	for a convincing argument eg 34 is 107 so NO; (108−5)÷3 is not an integer		
26		conclusion	P1	30 ÷ 70 (=0.428)	26 ÷ 60 (=0.4333…)	30 ÷ 26 (=1.153…)
		(supported)	P1	60 × "0.428…"	70 × "0.4333…"	60× "1.153…"
			C1	for conclusion linked to 25.7 mins, 30.3 miles or 69.2 mph		

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27 (a)		$22 \leq f < 24$	B1
(b)		21.9	M1 $x \times f$ using midpoints
			M1 (dep on previous mark) "$x \times f$" ÷ 40
			A1 accept 22 if working seen
28		9.54	P1 $10^2 - 5^2$ (=75)
			P1 "75" + 4^2 (=91)
			P1 $\sqrt{(10^2 - 5^2 + 4^2)}$
			A1 9.53 – 9.54
29		0.06	M1 for 0.2 and 0.3
			A1 cao