



# General Certificate of Secondary Education

Mathematics 4302  
*Specification B*

*Module 3 Tier F 43003F*

## Two-Tier Practice Paper

# Mark Scheme

*June 2006*

Further copies of this Mark Scheme are available to download from the AQA Website: [www.aqa.org.uk](http://www.aqa.org.uk)

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**The following abbreviations are used on the mark scheme:**

<b>M</b>	Method marks awarded for a correct method.
<b>A</b>	Accuracy marks awarded when following on from a correct method. It is not necessary always to see the method. This can be implied.
<b>B</b>	Marks awarded independent of method.
<b>M dep</b>	A method mark which is dependent on a previous method mark being awarded.
<b>ft</b>	Follow through marks. Marks awarded for correct working following a mistake in an earlier step.
<b>SC</b>	Special Case. Marks awarded for a common misinterpretation which has some mathematical worth.
<b>oe</b>	Or equivalent.
<b>eeoo</b>	Each error or omission.

**MODULE 3 FOUNDATION TIER**

**43003F**

1	0.5	B1	
	50%	B1	
	$\frac{3}{4}$	B1	oe
	0.75	B1	

2(a)	8360	B1	accept words
2(b)	8400	B1	accept words

3(a)	Any whole number pair whose product is 24	B1	do not allow 2 by 12 or 12 by 2
3(b)	No, with any attempt at explanation	B1	YES if supported by the correct diagram B2
	24 is not a square number	B1	5 by 5 square with centre missing or 7 by 7 hollow square
3(c)	attempts to find a quarter of 24	M1	e.g. $24 \div 4$ oe
	6	A1	
	$(6 \times 3) + (24 - 6) \times 2$	M1	with or without brackets
	£54	A1	

4(a)	46p	B1	
4(b)	94p	B1	
4(c)	$340g = £1.21$	M1	
	$£1.40 - £1.21 = 19p$	A1	must show or imply subtraction
4(d)	£1.07 and 94p identified with intention to subtract	M1	
	13p or £0.13	A1	

5(a)	$5 \div 34$ or $500 \div 34$	M1	may be implied by 14.7... or 0.147... or build up to 13, 14 or 15 cartons
	shows an answer of 14	A1	not awarded for decimal answer
5(b)	shows $1000 \div 34$ is 29.4...	M1	oe e.g explains 24p change when doubled allows buying of further carton (M1A1) or $34 \times 28 = £9.52$
	so 29 (is more than twice 14)	A1	

6(a)	shows a correct method for finding 17.5% of 76	M1	$\frac{17.5}{100} \times 76$ build up method must be complete
	(£)13.3(0)	A1	$76 \times 1.175$ M2
	total with VAT = £89.30	A1	ft if M1 awarded
6(b)	$(15 / 40) \times 100$	M1	oe
	37.5	A1	oe
7	728.5	B1	
8	$340 \div 17$	M1	
	Their $20 \times 2$ or their $20 \times 6$ or their $20 \times 9$	M1dep	
	40, 120 and 180	A1	
9(a)	92 and 8	B1	
9(b)	35 or 81	B1	
9(c)	81 and 64	B1 B1	
9(d)	60	B1	
9(e)	identifies 81, 92 and 64	M1	
	237	A1	
10(a)	90	B1	
10(b)	24	B1	
11	shows complete correct method	M1	$\frac{25}{100} \times 56$ or $56 \div 4$ or $56 \div 2 \div 2$
	14	A1	
12(a)	shows a correct method for division	M1	$\begin{array}{r} \underline{25} \\ 52 \overline{) 1300} \\ \underline{104} \phantom{0} \\ 260 \\ \underline{260} \\ 0 \end{array}$ oe build up method to reach 24, 25 or 26
	obtains an answer 2 for 10s digit	A1	
	25	A1	
12(b)	25	B1ft	

13(a)	49	B1	
13(b)	$7 < \text{answer} < 8$	B1	allow written answers
14(a)	0.9	B1	
14(b)	0.009	B1	
15	$\frac{7-2}{8}$	M1	oe e.g 0.875 – 0.25
	$\frac{5}{8}$	A1	oe
16	shows speed = $\frac{\text{distance}}{\text{time}}$	M1	with any attempt to substitute values
	6 / 1.5	M1	oe (6 / 1.3 gets M1 M0) scaling 2 miles in 30 minutes M2
	4	A1	
17	intention to add $\frac{1}{2}$ and $\frac{1}{3}$	M1	oe may be implied by 5/6, 10/12 etc
	multiplies their 5/6 by 7	M1	$\frac{35}{6}$ or $5\frac{5}{6}$ implies M2
	6	A1	
17alt	attempts to find total for one dog	M1	may be implied by $3\frac{1}{2}$ or $2\frac{1}{3}$
	attempts to find total for both dogs and attempting to add	M1	$\frac{35}{6}$ or $5\frac{5}{6}$ implies M2
	6	A1	
18(a) (i)	$2^4 \times 3$	B1	either order
18(a) (ii)	$2^4 \times 3 \times 5$	B1	any order both correct in non index form B0 B1
18(b)	$32 = 2^5$	M1	may be seen in (c) if (b) blank or lists sufficient multiples of both numbers correctly (24,) 48, 72, 96 and (32,) 64, 96
	$2^5 \times 3$ or 96	A1	
18(c)	8	B1	sc1 for 16(b) and 16(c) reversed