1.	(a)	Cube		B1	
	(b)	(i)	28 (cm)	B1	
		(ii)	24	B1	
			cm <sup>2</sup>	B1	
			ND units mark is independent		[4]
2.	(a)	(i)	Cuboid or rectangular prism	B1	
		(ii)	(Triangular) prism	B1	
		(iii)	Cylinder or circular prism	B1	
	(b)	(Squ	are based) pyramid	B1	F 41
					[4]
3		rract n	et	<b>B</b> 3	
5.	AU	ficet ii	Six correct faces joined up (not a net), B2;	<b>D</b> 5	
			Two more correct faces, B1;		
			SC2 correct net of open box		[0]
					႞ႄၪ
4.	(a)	Corr	ect faces shaded	B1	
	(b)				
			7		
		L.		B1	
				DI	
	(c)				
				B1	
					[3]
5	(a)		Tangant at A	D 1	
5.	(a)	(I) (ii)	Correct diameter	DI P1	
	(a) (b)	(II) (i)	Cuboid	B1 B1	
	(0)	(1)	Rectangular prism; but not box	DI	
	(b)	(ii)	(square based) pyramid	B1	
		. /			[4]

6.	Prism with triangu	lar cross section B1 for any prism	B2	
		Allow free hand sketch		[2]
7.	(a) 6		B1	
	(b) Correct net	B1 for 4 squares in a row or column B2 for correct net for open-topped cube ( $\pm 2$ mm) SC1 for correct net in correct scale factor	B3	
				[4]
8.	$3.14~(0.5 \times 8.5^2) \times$	12.4 Ml for 3.14 (0.5×8.5) or 56.7 seen	M2	
	703.28 to 703.73	or 704	A1	
	cm <sup>3</sup>		B1	[3]
9.	$1.2^2 + 3^2 (= 10.44)$	) Must add two squares	M1	
	$\sqrt{(\text{Their 10.44})}$	Dependent on first M1	DM1	
	3.2(3)		A1	[3]
10.	(a) $0.5 \times (4+1)$	$0) \times 4$	M1	
	28	~~	A1	

11.	$160^2 + 75^2$ (25600)	+5625) <b>If Trig used</b> Must find correct angles (64.9 or 2.1) and use a complete method e.g. x 75 160	M1	
		$\frac{1}{\sin 90} = \frac{1}{\sin 25.12} = \frac{1}{\sin 64.88} = 1$		
	31225		A1	
	176.7		A1	
	177 or 180		B1	
		Independent mark. Award for any value seen (or implied by a calculation) greater than 3 s.f. that is rounded to 3 s.f. or 2 s.f.		
				[4]
12.	$17^2 - 15^2 (=64)$	or $x^2 + 15^2 = 17^2$	M1	
	$\sqrt{64}$	For squaring, subtracting and indication of square rooting	DM1	
	8		A1	[3]
13.	Correct set of 6 sq	ares B1 for 5 correct squares	B2	[2]
14.	$\pi  imes 3.75^2$	44.1	M1	
	their $44.18 \times 11.4$		M1 dep	
	503 (.64)		A1	
	cm <sup>3</sup>		B1	[4]
15.	$3^2 + 1.2^2$ (=10.44)	Must add two squares	M1	
	$\sqrt{10.44}$ their 10.44	Dependent on first M1	M1	
	3.2 or 3.23	Note: 3.2 scores A0	A1	
		Answer $= 3$ with no working scores M0		[3]
				[3]

16.	(a)	$\frac{1}{2} \times 20 \times 4$		M1
			oe	
		40		A1
		cm <sup>2</sup>		B1
			Units mark	
	(b)	(i)	_	
			Accept any orientation	B1
		(ii) 9.1 >	< 5	M1
		45.5		A1

[6]

17.	(a)	$\sqrt{18}$		M1,A1cao
			<i>M1 for</i> $AB^2 = 3^2 + 3^2$	
			A1 for answer	

18.	(a)	$\frac{6}{10}$		M1
		$\frac{3}{5}$	<i>de e.g. 0.0</i>	A1

	(b)	$50\div10\times7$	oe e.g. $5 \times 7$	M1	
		35	0	A1	
	(c)	200 ÷ 100 ×	30 oe e.g. $10\% = 20, 20 \times 3$	M1	
		60		A1	
	(d)	$\frac{5}{10} + \frac{2}{10}$	06	M1	
		$\frac{7}{10}$		A1	
			<i>oe e.g.</i> $\frac{14}{20}$ <i>or 0.7</i>		
					[8]
19.	40 ÷ 1	$100 \times 60 \text{ or } 4$	× 6 oe	M1	
	55 ÷ :	$5 \times 2$	06	M1	
	24 <b>or</b>	22		A1	
	24 an	d 22 and cor	nclusion	A1	[4]
20.	15 ÷ 1	100 × 380	<i>oe or</i> 38 + 19 <i>seen</i>	M1	
	57		SC1 for 323 with no working	A1	
					[2]
21.	(a)	7.5		B1	
		4.20	420p with £ crossed out. SC1 for 4.31 or 4.32	B1	
	(b)	31.5 ÷ 150 ×	< 100 Oe	M1	
		21		A1	[4]
22.	(a)	36 ÷ 100 × 4	20 oe allow full method of: 10%, 10%, 10%, 5%, 1%	M1	
		151.20	Not 151 2	A1	
	(b)	84 ÷ 240 ×1	00	M1	

**23.** 
$$\frac{5}{100} \times \pounds74.40$$
 M1  
 $SC1 \text{ for } \pounds7.44 \text{ for } 10\% \text{ and attempt at } 5\%$   
 $= \pounds3.72$  A1  
 $SC1 \text{ FOR } \pounds78.12$ 

24. 
$$\frac{70}{100} \times 90$$
 M1  
 $10\% = \frac{90}{10}$ 

A1  
$$70\% = \frac{90}{10} \times 7 \ oe \qquad M1$$

[2]

[3]

[2]

25. £	2112.80		M1,A1,A1
		M1 for 17.5% of 96 A1 for f 16.80 A1 answer	

26. 
$$\frac{15}{100} \times 840$$
 M1  
= 126 M1  
 $\frac{85}{100} \times 840$  M1

$$840 - 126 = 714$$
 A1 A1

27.  $\frac{17.5}{100} \times 174.80$  M1 Accept full alternative method:  $10\% + 5\% + 2\frac{1}{2}\%$ 

A1

30.59

35

= 63

[2]

**28.** 
$$\frac{48}{400} \times 100$$
 M1  
= 12% A1

[2]

$650 \times \frac{15}{100}$		M1
	oe Accept a complete build up method	
97.50	Ignore subsequent working NB 97.5 scores A0	A1

[2]

[3]

M1

oe	
Build up must be a	correct
10% = 0.77	
5% = 0.38(5)	allow 0.39
$2\frac{1}{2}\% = 0.19(25)$	allow 0.195/0.20
and adds	

29.

**30.**  $\frac{17.5}{100} \times 7.7(0)$ 

$$\frac{17.5}{100} \times 7.7(0) + 7.7(0)$$
M1 dep  
*oe*

9.05 and Saverstore	A1
Need both	
Allow 9.04 or 9.0475	

47. Allow 9.06 from build up method

A1t	Sight of 1.175 7.7(0) × 1.175	M1 M1 dep
	9.05 and Saverstore	A1
	Need both Allow 9.04 or 9.0475	

	A1t	Sight of 1.175 8.99 ÷ 1.175 7.65() and Saverstore <i>Need both</i>	M1 M1 dep A1
	Alt	$\frac{17.5}{100} \times 7.7(0)$ <i>oe Build up must be correct</i> $10\% = 0.77$ $5\% = 0.38(5)$ <i>allow 0.39</i>	M1
		$2\frac{1}{2}\% = 0.19(25)$ allow 0.195/0.20 and adds	
	8.99 – 7 1.29 an	7.7(0) d 1.35 and Saverstore Allow 1.34 or 1.3475 for 1.35 Need all three	M1 dep A1
31.	Use of	multiplier 1.04 eg 3000 × 1.04 = 3120	B1
	3000 ×	1.04 <sup>5</sup> Must use a 'sensible multiplier' 1.4, 1.004 etc. for M1	M1
	3649.96	5 Accept £3650 if Ml awarded. 649.96 only B1, Ml, A0	A1
	Adding	<b>34% per annum for 5 years</b> Must have £3120 as first answer and show working for all at least 4 years.	M1
	At least	2 more years correct Values are (£)3244.8(0), (£)3374.59(2), (£)3509.58 or(£)3509.57(568)	A1
	3649.96	5 or 3649.95 <i>Must be exact but accept £3650 if Ml, Al awarded.</i> <i>If values rounded to nearest penny values are</i> <i>3120.00, 3244.80, 3374.59, 3509.57, 3649.95</i> <i>649.96 only Ml, Al, A0</i>	A1
32.	12198 -	- 11400 (=798) 12198/11400 (=1.07)	M1
	Their 7	98/11400 × 100	DM1

Their 
$$\frac{198}{11400 \times 100}$$
  $(1.07 - l) \times 100$ 

7

A1

[3]

Percentage is 
$$\frac{21}{90} \times 100$$
 M1

Accept 23, 
$$23\frac{1}{3}$$
,  $23.33...$   
SC2 for 23.4 or 23.34  
or  $\frac{69}{90} \times 100$  M1  
= 76.6 or 77 or 76.7 A1  
23.3 B1

[3]

A1

[4]

34.	SF =	48/36	oe 1.33; $\div 3 \times 4$ seen in any calculation eg 36 $\div 3 = 12$ ; $12 \times 4 = 48$ or 330 $\div 3 = 110$ ; $110 \times 4 = 440$ ; award for any correct answer but look for incorrect method: eg 355, 100, 100, 745; 400, 100, 100, 800	M1	
	440,	100, 100, 960	A1 for 3 correct	A2	[3]
35.	3560 7120	0 ÷ 5	28480, SCI	M1 A1	[2]
36.	(a) (b)	35600 ÷ 5 7120 36200 – 356	28480 SCI 500 36200/35600 × 100	M1 A1 M1	
		Their 600 ÷ 1.69 or 1.68	35600 × 100 <i>Their 36200/35600 × 100 – 100</i> (539)	DM1 A1	[5]

37.	$\frac{21}{30} \times 45 \text{ or } \frac{21}{2} \times 36$	or 70×45	M1
		$Or \ \frac{21}{2} + 21$	
	(£) $10.50 \times 3 = (£)$	31.50 or 3150(p)	A1
	Consistent units	Must be £ on answer line (£)31.5 scores M1A1	B1
38.	$3 \times 4$ and $3 \times 9$		

50.	or $3 \times 6$ and $3 \times 7$ or $9 \times 7$ and $6 \times 4$	for identifying the areas of two correct rectangles	M1	
	12 + 27			
	or 18 + 21		M1 dep	
	or 63 – 24			
	39		A1	
		must show evidence of correct working		

[3]

39.	$5 \times 4$	oe		M1	
			or evidence of counting squares		
	20			A1	[0]
					[2]
40	$(\mathbf{a})$	2 × П × 2 2		M1	
40.	(a)	2 × 11 × 2.2	0e	1011	
		13.8()		A1	
			14		
	(b)	$\Pi  imes 2.2^2$		M1	
		15.(2)		A1	
		$m^2$		B1	
			Unit mark		
					[5]
41.	Leng	th 8 and widt	h 5 allows by 5 restangle drawn	B2	
			or B1 rectangle with area 40		
			or B1 rectangle with perimeter 26 cm		
42.	(a)	$\pi  imes 8^2$		M1	
		201.06, 20	0.96, 201.14	M1	
		CIII	Allow 201, 200	DI	
			Independent mark for units		
	(b)	$2\pi \times 4.5, 2\pi$	Independent mark for units $x \times 9, \pi \times 4.5, \pi \times 9$	M1	
	(b)	$2\pi \times 4.5, 2\pi$	Independent mark for units $\pi \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle	M1	
	(b)	$2\pi \times 4.5, 2\pi$	Independent mark for units $x \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle	M1 A1	
	(b)	2 <i>π</i> ×4.5, 2 <i>π</i> 14.1 23.1	Independent mark for units $\pi \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle Allow (their 14.1) + 9	M1 A1 A1	
	(b)	2 <i>π</i> × 4.5, 2 <i>π</i> 14.1 23.1	Independent mark for units $\pi \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle Allow (their 14.1) + 9	M1 A1 A1	[6]
	(b)	2π×4.5, 2π 14.1 23.1	Independent mark for units $\pi \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle Allow (their 14.1) + 9	M1 A1 A1	[6]
43.	(b) 28.8 -	$2\pi \times 4.5, 2\pi$ 14.1 23.1	Independent mark for units $\pi \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle Allow (their 14.1) + 9	M1 A1 A1 M1	[6]
43.	(b) 28.8 -	$2\pi \times 4.5, 2\pi$ 14.1 23.1 ÷ 2	Independent mark for units $\pi \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle Allow (their 14.1) + 9 $28.8 - 2 \times 10.8$	M1 A1 A1 M1	[6]
43.	(b) 28.8 - Their	$2\pi \times 4.5, 2\pi$ 14.1 23.1 ÷ 2 14.4 - 10.8	Independent mark for units $\pi \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle Allow (their 14.1) + 9 $28.8 - 2 \times 10.8$	M1 A1 A1 M1	[6]
43.	(b) 28.8 - Their	$2\pi \times 4.5, 2\pi$ 14.1 23.1 $\div 2$ 14.4 - 10.8	Independent mark for units $\pi \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle Allow (their 14.1) + 9 $28.8 - 2 \times 10.8$ Their 7.2 ÷ 2	M1 A1 A1 M1 M1 dep	[6]
43.	(b) 28.8 - Their 3.6	$2\pi \times 4.5, 2\pi$ 14.1 23.1 ÷ 2 14.4 - 10.8	Independent mark for units $x \times 9, \pi \times 4.5, \pi \times 9$ Attempt to find circumference of circle or semi-circle Allow (their 14.1) + 9 $28.8 - 2 \times 10.8$ Their 7.2 ÷ 2	M1 A1 A1 M1 M1 dep A1	[6]

44.	$\pi \times 9$	)		M1	
			$2 \times \pi \times 4.5$ ; or $3.14 \times 9$ ;		
			not $3 \times 9$ or $3.1 \times 9$ unless these are clearly stated as $\pi$		
	28.3			A1	
			28.20 to 28.29 28 with no working award M1		
					[2]
45.	$4 \times 5$	5 or $4 \times 6$ or	$\frac{1}{2} \times 1 \times 4$ or	Ml	
	$\frac{1}{2}$ ×	$4 \times 6 \text{ or } \frac{1}{2}$	$\times 4 \times 5$ or		
	$\frac{1}{2}$ (	$(5+6) \times 4$			
	$4 \times 5$	$5 + \frac{1}{2} \times 4 \times$	1 or	DM1	
	$4 \times 6$	$\tilde{\mathfrak{s}} - \frac{1}{2} \times 4 \times$	1 or		
	$\frac{1}{2}$ ×	$(4 \times 6 + \frac{1}{2})$	$\times 4 \times 5$ or		
	$2 \times 1$	1 or $5.5 \times 4$			
			or their $20 + their 2$ or their $24 - their 2$ or $1/2$ their $(20 + 24)$		
			or their 12 + their 10		
	22			Λ 1	
	LL		SC1 for 22 with no working	AI	
	2			D 1	
	m-		units mark	BI	
					[4]
46.	(a)	$\frac{1}{2} \times \pi \times 1$	.4 <sup>2</sup>	M1	
		7 2 2 077 to 2 1		Λ 1	
		5.077 to 5.1	6.15 to 6.16 SC1 0.5 $\pi$ 1 .4 <sup>2</sup> = 3 gets 2 marks	AI	
		$m^2$		B1	
	(b)	Their (a) $\times$	0.5	<b>M</b> 1	
			imes 50 after attempt to convert to cm <sup>2</sup> eg 300 $ imes$ 50		
		1.5()		Alft	
					[၁]
47.	$\pi \times \epsilon$	5		M1	
			$2 \times \pi \times 3$ ; $3.14 \times 6$		
			<i>Not 3</i> $\times$ 6 <i>or 3.1</i> $\times$ 6 <i>unless these are clearly stated as</i> $\pi$		

18.8 to 18.9 19 with no working SC1

[2]

A1

48.	$\frac{1}{2}$ . 10 × 6	M1	
	30	A1	
			[2]

49.	One correct area seen <i>e.g. 136, 56, 290, 221, 91, 493</i>	M1
	Complete method by adding or subtracting rectangles	M1
	402	A1

[3]

50.	$\frac{110}{360} \times \pi  9.7^2$		M2
		M1 for $\frac{110}{360}$ seen	
	90.3(199)		

51.	$\pi \times 15$	M1	
	47 to 47.124	A1	
			[2]

52.	$5 \times 1$	.6 (=8)		M1	
	$\frac{1}{2}$ $\pi$	$2.5^2 (= 9.817)$	')	M1	
			Allow even if $\frac{1}{2}$ is missing		
			(=19.63) or 5 used as radius (= 39 26 ) <b>but not both</b>		
	Rect	angle or semi	icircle × 230 dep on the relevant M1	M1 dep	
	Addi	ing their 2 vo	lumes or areas dep on 1st and 2nd Mls	M1 dep	
	4097	' to 4100 incl	usive	A1	[5]
53.	(a)	4		B1	
	(b)	6		B1	
54.	(a)	8z = 11 + 5		M1	
	( )	z = 2		A1	
	(b)	3w - 6 = 9		M1	
		3w = 9 + 6		DM1	
		w = 5		A1	
			w - 2 = 3		
			w = 2 + 3		
			w = 5 Special Case		
			Scores SC1		
			3w - 2 = 9, 3w - 11 w - 11/3		
			Sw = 11, w = 11/5 Must be complete solution		
			Reverse Flow Chart method also acceptable		
					[5]
55.	(a)	3x + y	B1 for $3x$ or B1 for (1)v	B2	
	(4)		B0 total for 3xy		
	(b)	4(c + 3)		B1	
		<i>.</i>	2(2c+6)		
	(c)	x(x + 5)	B1 for x or $x + 0$ , B1 for $(x - 5)$	B2	
			J		[5]

56.	(a)	4x	<b>B</b> 1
	(b)	3x + 7y	B2

## B1 for 1 term correct

(c)	12 <i>a</i>		
		do not accept $12 \times a$ or $a12$	

B1

M1 A1 M1 [4]

57.	(a)	4x = 12
		3
	(b)	$y + 5 = 28 \div 2$ or $2y + 10 = 28$

$$y = 14 - 5$$
  
or  $y = \frac{28 - 10}{2}$  M1 dep

9 A1 (c) 
$$7z + 3z$$
 or  $9 - 2$  M1

$$10z = 7$$
 A1  
 $\frac{7}{10}$  A1

**58.** (a) x + 5 penalise once B1 Allow x = x + 5

(b) 
$$x - 2$$
 incorrect letter B1  
 $Ali + 2 = x$  is BO

(c)
$$2x$$
 consistently used  
Accept  $x \times 2$ ,  $2 \times x$ ,  $x + x$  but not  $x2$ B1(d) $2x = 180$ M1

$$x - 32.5 = 57.5$$

90

[5]

A1

A1

59. (a) 35  
(b) 
$$4x = 5 + 7$$
  
(c)  $5y + 11 = 3y + 21$   
 $5y/3 + 11/3 = y + 7, 1.6y + 3.6 = y + 7$   
 $1.7y + 3.7 = y + 7$   
allow 1 error on 1st or 2nd line

Allow embedded solutions but if contradicted then Ml only.

$$5y - 3y = 21 - 11$$
 DM1  
 $\frac{5}{3}y - y = 7 - \frac{11}{3}$ 

5

[8]

60.	(a)	$d^{3} + 6d$		B2	
			B1 for each term		
			Do not accept d6		
	(b)	$g^8$		B1	
	(c)	2p + 10 + 6p	p-3	M1	
			For 3 correct terms		
		8p + 7		A1	
			SCI for $8p + n$ or $np + 7$ provided consistent with any working shown		
					[5]
61.	(a)	7c		B1	
	(b)	d <sup>3</sup>		B1	
	(-)	(1)		D1	
	(C)	(1) p or $+ 0$	q seen	BI	
		(1) p + 6q		BI	[4]
62.	+5 tl	nen ÷ 4		M1	
	11			A1	
					[2]
63.	(a)	4x		B1	
	(b)	6 <i>p</i> or (+) 4	<i>q</i> seen	B1	
			Not –4q		
		6p + 4q	further working penalised	B1	
			jurner working pendused		[3]
64.	Gue	ss between 4	M1		
			Must be evaluated correctly to at least		
			(4.1, 60.721), (4.2, 65.688), (4.3, 70.907)		
			(4.4, 76.384), (4.5, 82.125), (4.6, 88.136)		
	Bracketing answer between 4.6 and 4.7 (inclusive)			M1	
			Bracket answer		
	Testing a value $\leq 4.65$ and $>$ actual answer				
	(4.63	301141) and s	stating answer as 4.6	A1ft	
			(4.65, 91.244625), (4.64, 90.617344)		

[6]

65.
 
$$6d-2c$$
 B2

  $B1 \text{ for } - 2c$ 
 (b)  $x(x + 5)$ 
 B2

  $B1 \text{ for } x$ 
 (c)  $32^{\circ}$ 
 B1 for  $x$ 
 $M1 \text{ for } 2x + x + 84 = 180$ 
 M1,A1,A1

  $A1 \text{ for } 3x = 96$ 
 A1 cao

66.	1.5	M1,A1,A1
		M1 for collecting x terms on one side and numbers on the other.
		A1 for $2x = 3$
		Al cao

**67.** (a) 
$$2(x+3)$$
 B1  
(b)  $12y+3$  B1

(c) 
$$4x^3 + 20x$$
 B2 B1 one correct term

fw deduct 1 mark e.g. in (c)  $4x^3 + 20x = 24x^3$  scores B2 - 1or  $4x^3 + 20 = 24x^3$  scores B1 - 1

**68.** (a) 
$$x(x+4)$$
 B1

(b) 
$$p-3 = 2r \text{ or } p/2 = \frac{3}{2} + r$$
 M1  
or  $(p+3)/2 \text{ or } (3-p)/2$ 

$$(p-3)/2 \text{ or } p/2 - {}^3/_2$$
 A1

[7]

[3]

[4]

69. (a) 
$$8x - 4 + 3x + 18$$
  
Allow one error  
 $11x + 14$   
(b)  $4x^2 - 2x^3$   
B1 each term fw such as  $= 2x^5$  only give B1  
 $4x^2 - 2x^2 = 2x^2$  is B1,  $4x^2 - 2x^2 = 6x^4$  is BO

[4]

70.	(a)	4v = 9 + 1 (	or 10)	<b>M</b> 1
		<i>v</i> = 2.5		A1
			0e	
	(b)	3w + 2w = 1	19–4 oe Allow one sign error	M1
		5 <i>w</i> = 15	Gathering terms	M1dep
		<i>w</i> = 3 A1		
	(c)	$x = 5 \times (11 - 1)^{-1}$	(x + 2) $x = 5 \times 11 + 10$	M1
		65		A1
	(d)	4y + 12 = 9	y – 18 Allow one error	M1
		30 = 5y, -52	y = -30 ft if M1 awarded and equation in form $ay = b$ with no further errors	A1ft
		6	ft only if M1, A0 previously and their equation of form $ay = b$ is solved correctly	A1ft
71.	(a)	4(x – 2)		B1
	(b)	y()		M1
		y(y + 2)		A1
72.	7 <i>x</i> +	17		B2
			B1 for each term If final answer incorrect $10x + 5 - 3x + 12$ (with at most 1 error) scores B1 7x + 17 = 0 B0 B1	
73.	(a)	$m^7$		B1
		$p^3$		B1
	(b)	$q^8$		B1
74.	(a)	3(x-2)		B1
	(b)	x(x-2)		B2

*B1 for* 
$$x(x...)$$
 *or*  $x(...-2)$ 

[9]

[3]

[2]

75.	(a)	8d-4e		B1,B1	
	(b)	$6x^2 + x - 1$	15 M1	,A1,A1	
			M1 for expanding (must have 4 terms) A1 for at least 3 correct A1 cao		
	(c)	(i) y		B1	
		(ii) y <sup>-1</sup>		B1	[7]
76.	Corr	ect reflected	shape and correct position B1 for correct reflected shape in incorrect position to right of line	B2	
					[2]
77.	(a)	Correct ref	flection	B1	
	(b)	Correct rot	tation B1 for 90° anticlockwise rotation about O or correct rotation with wrong centre of rotation	B2	
			SC B1 their B correctly rotated		[3]
78.	(a)	Correct en	largement B1 for enlargement any scale factor (not 1) Accept any orientation	B2	
	(b)	36 ÷ 4		M1	
			$or 3 \times 3$ or 54 : 6		
		9	SC1 for their $(SF in (a))^2$	A1	
			Accept ratio 1 : 9 or 9 : 1		[4]
70	3 010	as correct si	70	<b>B</b> 1	[5]
19.	complete shape correct		B1		
	com	proto snupe e		DI	[2]
80.	(a)	Correct and	swer drawn B1 for a reflection in $x = c$ or $y = 3$	B2	
	(b)	Fully corre	ect translation Vertices at (4, 3), (4, 7), (5, 4)	B1	