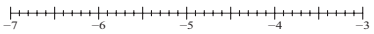
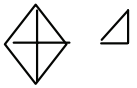
November 2010

1380/2F					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		58	1	B1 cao
	(b)		14	1	B1 cao
	(c)		100.5	1	B1 accept $100\frac{1}{2}$
	(d)			1	B1
2	(a)		8	1	B1 cao
	(b)		18	1	B1 cao
	(c)			2	B1 cao
					B1 (can be any orientation)

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Question	**Working**	**Answer**	**Mark**	**Notes**
3	4.38 + 0.45 + 0.29 + 0.29 = 5.41 10 – 5.41 Or 10 – 4.38 = 5.62 5.62 – 0.45=5.17 5.17 – 0.29=4.88 4.88 – 0.29 = 4.59	4.59	3	M1 for adding 3 or 4 items with consistent units (eg 4.38 +0.45 + 0.29 + 0.29 or eg 45 + 29 + 29) or digits 541 or 512 or 103 or 496 seen M1(dep) for subtracting their total from 10 or 1000 (consistent with their monetary units) or for an answer which when added to their total gives 10 or 1000 A1 for £4.59 or £4.59p or 459p if £ sign crossed out Or M2 Repeated subtraction from 10 or 1000 of 3 or 4 items with consistent units SC B2 for digits 459, 488 or 897 or 504 seen if M0 scored
4 (a)		12.3 cm or 123 mm	2	B1 for 12.1 – 12.5, $12\frac{1}{2}$, or 121 – 125 or $4\frac{14}{16} - 5\frac{1}{16}$ or 4.8 to 5.1 B1 for appropriate sensible unit: cm or mm or inches, or for eg 12 cm 3 mm
(b)		47 ± 2°	1	B1 for 45 – 49 (could be on the diagram)

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Question		**Working**	**Answer**	**Mark**	**Notes**
5	(a)		10	1	B1 cao
	(b)		6	1	B1 cao
	(c)		A and E	1	B1 for both
	(d)		2	1	B1 for 2, ×2, 2×, times 2, 2 times
6	(a)		$\frac{6}{11}$	1	B1 any equivalent fraction to $\frac{6}{11}$ (Accept $0.\dot{0}\dot{5}\dot{4}$)
	(b)		$\frac{2}{5}$	1	B1 any equivalent fraction to $\frac{2}{5}$ (Accept 0.4)
7	(a)		$5k$	1	B1 cao
	(b)		$4m$	1	B1 cao
	(c)		5	1	B1cao
	(d)		3	1	B1 cao

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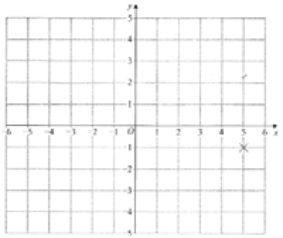
Question	**Working**	**Answer**	**Mark**	**Notes**
8 (a)(i)		(1, 2)	2	B1 (allow (x=1,y=2)
(ii)		(–4, –3)		B1(allow (x = -4, y = -3))
(b)		plot(5, –1) on grid 	1	B1 for plotting at (5, –1)
9 (a)		Pattern 5	1	B1 for squares 7 across and 6 down drawn in or in outline
(b)		12, 14	2	B1 cao for 12 on or by the table B1 ft for "12" + 2
(c)		625 is odd all terms are even	1	B1 for 625 is odd oe or all the terms in the sequence are even oe
10 (a)		1.5	1	B1 cao
(b)		10.4	1	B1 10.3 – 10.5

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Question		**Working**	**Answer**	**Mark**	**Notes**
11	(a)	$87 - 45$	42	2	M1 for identifying 45 and 87 A1 cao
	(b)	45+49+49+57+72+75+87 434 ÷ 7	62	2	M1 for (45+49+49+57+72+75+87) ÷ 7 or adding any 6 of the 7 values and dividing by 6 A1 cao
12	(a)		$\times$ at 1	1	B1 for $\times$ at 1 ± 0.5 cm
	(b)		$\times$ at $\frac{1}{2}$	1	B1 for $\times$ at $\frac{1}{2}$ ± 0.5 cm
	(c)		$\times$ at $\frac{1}{3}$	1	B1 for $\times$ between 1 cm and 4 cm to the left of $\frac{1}{2}$
13	(a)		hexagon	1	B1 cao
	(b)		arrows drawn	1	B1 cao
	(c)		obtuse	1	B1 (accept interior)

Question	Working	Answer	Mark	Notes
14	Alternative: FM: 10 pots cost 3.60 JS: 10 pots cost 3.15 + 35p = £3.50	Jim's store with reason	3	M1 for 180 ÷ 5 oe or 105 ÷ 3 oe or 36 or 35 oe seen A1 36 and 35 or 0.36 and 0.35 OR M1 for 180 ÷ 5 oe or 180×3 oe or 36 or 540 oe seen A1 108 oe or 1.08 OR M1 for 105 ÷ 3 oe or 105 ×5 oe or 35 or 125 oe seen A1 175 or 1.75 OR M1 for 180 × 3 oe or 105 × 5 oe or 540 or 525 oe seen A1 540 and 525 or 5.4(0) and 5.25 OR M1 for 5 ÷ 1.80 oe and 3 ÷ 1.05 (oe) or 2.7(77 or 2.8(57… seen A1 for 2.7(7..) and 2.8(5..) oe Alternative:(provided the same number of pots are considered from each shop) M1 for 1.80 ×2 oe or 1.05×3+1.05÷3oe or 3.6(0) or 3.5(0) A1 for 3.6(0) and 3.5(0) A1 for correct decision based on their values dep on M1 scored NB units can be ignored

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Question		Working	Answer	Mark	Notes
15	(a)		2	1	B1 cao
	(b)		1, 2, 7, 14	2	B2 for all 4 factors and no extras (B1 for 2 or 3 correct factors and no extras or 4 correct factors and no more than 2 extra)
16	(a)		0.068, 0.3, 0.306, 0.63	1	B1 cao
	(b)	$\frac{18}{24}, \frac{14}{24}, \frac{20}{24}, \frac{9}{24}$ 0.3(75), 0.5(83), 0.7(5), 0.8(33) or better or 37%, 58%, 75%, 83% or better	$\frac{3}{8}, \frac{7}{12}, \frac{3}{4}, \frac{5}{6}$	2	M1 for using a common denominator for all that is a multiple of 24, at least one fraction correct A1 oe or M1 all to decimals (at least 1dp) or % (at least 2SF) with at least one correct A1 oe Answer can be written with original fractions or any equivalent form. SC B1 for 3 in the correct position or B1 for all in the reverse order

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Question		Working	Answer	Mark	Notes
17	(a)	$(2 \times 459) + (3 \times 289)$ $= 918 + 867$	1785	2	M1 for $(2 \times 459) + (3 \times 289)$ or figures 1785 A1 cao
	(b)	$322 \div 1.84$	175	2	M1 for $322 \div 1.84$ A1 cao
	(c)	$7120 \div 8$	890	2	M1 for $7120 \div 8$ or $7120 \div 480$ A1 cao
18	(a)	$8\times 3+2$ $= 24+2$	26	2	M1 for $8\times 3+2$ A1 cao
	(b)	$42 = 3x + 6$ $36 = 3x$	12	2	M1 for $42-6$ or 36 or $42 = 3x + 6$ A1 cao

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Question	**Working**	**Answer**	**Mark**	**Notes**
19 (a)(i)	360 – (125 + 67 + 80)	88		M1 for 360 – (125 + 67 + 80) or 360 – 272 or 125 + 67 + 80 + x = 360 A1 cao
(ii)		Reason		B1 for sum of angles in a quadrilateral is 360^{o}
(b)(i)	144 – 69 Or 180 – 144 = 36 180 – 36 – 69	75		M1 for 144 – 69 or 180 – 144 = 36 and 180 – '36' – 69 A1 cao
(ii)		Reason		B1 for exterior angle = sum interior opp angles or sum of angles on a line = 180 **with** sum of angles in a triangle = 180
20 (a)		24 12 × × | × × × 6 11 | 46 × 21 × 19 | ×	3	B3 cao (B2 for 4, 5 or 6 entries correct) (B1 for 2 or 3 entries correct)
(b)		20	1	B1 cao
(c)		84	1	B1 cao

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Question	**Working**	**Answer**	**Mark**	**Notes**
21		2.42927(0474)	2	B2 for 2.42927 or better (B1 for 19.56 or 8.0518 seen) (B1 for 2.43, 2.429, 2.4292, 2.4293 or the digits 24927 or for $\frac{97800}{40259}$)
22	$BC^2 + 5^2 = 9^2$ $9^2 - 5^2 = 56$ $BC = \sqrt{56}$	7.48(3314774)	3	M1 for correct use of Pythagoras or 56 seen M1 (dep) for $\sqrt{"(9^2 - 5^2)"}$ A1 for 7.48 – 7.485
23	$(8 \div 20) \times 100$	40	2	M1 for $(8 \div 20) \times 100$ or $\frac{40}{100}$ or $\frac{8}{20} = \frac{8 \times 5}{20 \times 5}$ A1 cao
24	B = 20×2 = 40 C = $3 \div 4 \times 20$ = 15 D = $10 \div 100 \times 20 + 20$ = 22 20 + 40 + 15 + 22	97	4	M1 for 20×2 or 40 seen M1 for $3 \div 4 \times 20$ or 15 seen M1 for $10 \div 100 \times 20$ + 20 oe or 22 seen or 1.1×20 A1 cao

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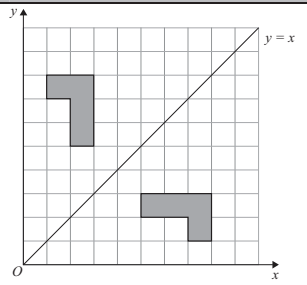
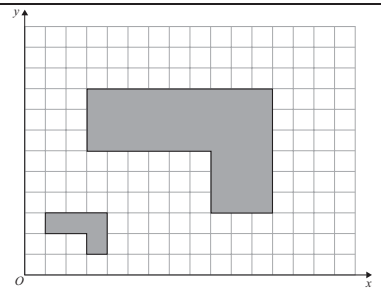
Question	**Working**	**Answer**	**Mark**	**Notes**
25 (a)			2	B2 cao B1 for shape in the correct orientation or for shape elongated or shortened by one square but with either top or bottom in the correct position. The shape must be above the line $y = x$)
(b)			3	B3 for correct enlargement in correct position (B2 for enlargement SF3 in incorrect position or enlargement, centre *O* but different scale factor (≠1) (B1 for 4 lines enlarged by SF3 anywhere or enlargement, not from *O*, different scale factor (≠1)

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Question	**Working**	**Answer**	**Mark**	**Notes**
26 (a)		Reason	1	B1 for valid reason eg only best students, Biased, sample is too small
(b)		Wrong	1	B1 for valid thing wrong eg The choices are all positive, question does not reference liking
(c)		Question	2	B1 for question with time frame or references 'normal' homework B1 for at least 3 valid non-overlapping boxes, need not be inclusive NB Response boxes must be intervals, but allow 0 on its own

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Question		**Working**	**Answer**	**Mark**	**Notes**
27	(a)	$2x = 10 - 3 = 7$ $x = 7 \div 2$	3.5	2	M1 for $2x = 10 - 3$ oe or $2x = 7$ oe or $(10-3) \div 2$ A1 for 3.5 oe T&I B2 for 3.5 on the answer line.
	(b)(i)		c^{11}	2	B1 accept c^{5+6}
	(ii)		e^{8}		B1 accept e^{12-4}
	(c)	$7x - 2x + 6y - 4y$	$5x + 2y$	3	M1 for expansion of the bracket eg $-2 \times x$ $-2 \times -3y$ or sight of $-2x \pm 6y$ M1 for collecting like terms with at least one of $5x$ or $+ 2y$ A1 cao SC B2 for $5x - 10y$