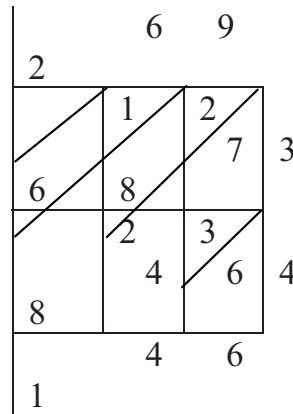


Paper 5523/03

No	Working	Answer	Mark	Notes
1	(a) 16+32 (b)	48 4	2 1	B2 cao (B1 for 16 or 32 seen) B1 cao
2	(a) (b)	10 12 15 37 9 17 7 33 19 29 22 70 $\frac{19}{70}$	3 2	B3 all correct (B2 for 4 or 5 entries correct) (B1 for 2 or 3 entries correct) B2 for $\frac{19}{70}$, accept 0.27 (...) (B1 for $\frac{k}{70}$ with $0 < k < 70$ or for the correct probability incorrectly expressed, eg '19 out of 70')
3	(a) (b) (c)	6 20 24	1 1 1	B1 cao B1 cao B1 cao
4	$(40 \div 10) \times (60 \div 20) \times (100 \div 10)$	120	3	M1 attempt one division (eg $40 \div 10$), may be implied by marks or number on one edge of diagram or by two of 4,3 and 10 seen M1 (dep) for $(“40 \div 10”) \times (“60 \div 20”) \times (“100 \div 10”)$ A1 cao OR M1 for $10 \times 20 \times 10$ or $40 \times 60 \times 100$ M1 (dep) for $“240000” \div “2000”$ A1 cao

No	Working	Answer	Mark	Notes
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<p>5 (a)</p>	<p>1076 807x 9146</p>  <p>200 60 9</p> <table border="1" data-bbox="212 845 526 933"> <tr> <td>6000</td> <td>1800</td> <td>270</td> <td>30</td> </tr> <tr> <td>800</td> <td>240</td> <td>36</td> <td>4</td> </tr> </table> <p>6000+1800 +270+800+240+36=9146</p>	6000	1800	270	30	800	240	36	4	<p>91.46</p>	<p>3</p>	<p>M1 for a complete method with relative place value correct, condone 1 multiplication error, addition not necessary A1 for 9146 A1 (dep on M1) for correct conversion of their total into £s OR M1 for a completed grid with not more than 1 multiplication error, addition not necessary A1 for 9146 A1 (dep on M1) for correct conversion of their total into £s OR M1 for sight of a complete partitioning method, condone 1 multiplication error, final addition not necessary A1 for 9146 A1 (dep on M1) for correct conversion of their total into £s</p>
6000	1800	270	30									
800	240	36	4									

<p>(b)</p>	<p>2.5×1000 or 2500</p>	<p>5</p>	<p>3</p>	<p>B1 for 2.5×1000 or 2500 M1 for weight $\div 500$ A1 cao</p>
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<p>6 (a)</p>		<p>(0)76</p>	<p>1</p>	<p>B1 for $(0)76^\circ (\pm 2^\circ)$</p>
<p>(b)</p>			<p>2</p>	<p>B1 for a pt marked on a bearing of $155^\circ (\pm 2^\circ)$ from <i>B</i> or a line on a bearing of $155^\circ \pm 2^\circ$ B1 for a point 5 cm (± 2 mm) from <i>B</i> or a line of length 5 cm (± 2 mm) from <i>B</i></p>

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No	Working	Answer	Mark	Notes
7		900 18 720 135	3	B3 all correct (B2 for 2 or 3 correct) (B1 for 1 correct).
8	$2 \times 3 = 6$	e.g. $2 \times 3 = 6$	2	B2 for a correct example (B1 for correctly multiplying any two prime numbers together or for $2 \times$ prime number not evaluated)
9			2	B2 for fully correct with 5 or more additional kites (B1 for a tessellation of 4 kites, 2 of which must be inverted, ignore remainder of diagram)
10 (a) (b)		31 $4n - 1$	1	B1 for 31, accept 23,27, 31 B2 for $4n - 1$ oe (B1 for $4n + k$, k any integer)
11 (a) (b)	$r + 2r + 5 + 2r + 4r - 3$ $9r + 2 = 65$	$9r + 2$ 7	2 2	M1 for intent to add the 4 terms, can be implied by sight of $9r$ A1 cao M1 ft for " $9r + 2$ " = 65 or for correct inverse operations A1 cao NB: algebra seen in (b) can attract marks in (a) if (a) left blank
12 (a) (b) (c)(i) (ii)		negative line of best fit ~ 22 ~ 2.8	1 1 2	B1 cao B1 straight line passing between ((4, 15) and (4, 20) and between (1, 40) and (1, 45) B1 ft from single line segment with negative gradient ± 1 full (2mm) square B1 ft from single line segment with negative gradient ± 1 full (2mm) square

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No	Working	Answer	Mark	Notes
13	$12 \times 10 \div 2 = 60$ $5 \times 3 = 15$ $60 - 15 = 45$	45	3	M1 for $12 \times 10 \div 2$ or 60 seen M1 for 5×3 or 15 seen A1 cao SC: B2 for answer of 105
14 (a)	eg $10\% + 5\% + 2.5\% = \pounds 2 + \pounds 1 + \pounds 0.50$ $\pounds 20 + \pounds 3.50$	23.50	3	M1 for $\pounds 2$, $\pounds 1$ and $\pounds 0.50$ or $\pounds 3.50$ seen or $\frac{17.5}{100} \times 20$ oe M1 (dep) for “ $\pounds 3.50$ ” + $\pounds 20$ A1 for 23.5 (0)
(b)	$75 \div (3+1+1) = 15$ $15 \times 3 = 45$	45	3	M1 for $75 \div (3+1+1)$ M1(dep) for “15” $\times 3$ A1 cao
(c)	0.8×200	160	2	M1 for 0.8×200 A1 for 160, accept 160 out of 200 SC: B1 for $\frac{160}{200}$ or 160 in 200
15		386 – 420	3	M1 for 2 of 20, 4, 0.2 A1 for $\frac{80}{0.2}$ or $\frac{84}{0.2}$ or 100×4 or 105×4 or 20×20 or 21×20 A1 for answer in range 386 – 420
16 (a)	2.3×20	46	2	M1 for 2.3×20 A1 cao
(b)	$480 \div 400$	1.2	2	M1 for $480 \div 400$ A1 for 1.2 or equivalent reduced fraction
17 (a)		20	1	B1 cao
(b)		$x(x + 4)$	1	B1 cao
(c)(i)		m^7	2	B1 cao
(ii)		t^4	2	B1 cao
(d)	$x^2 + 5x + 3x + 15$	$x^2 + 8x + 15$	2	M1 for 3 of 4 terms $x^2 + 5x + 3x + 15$, signs not needed A1 for $x^2 + 8x + 15$

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No	Working	Answer	Mark	Notes
18		Area Length None of these	3	B1 for Area only B1 for Length only B1 for None of these only
19 (a)		reflection line $y = x$	2	B1 for reflection B1 for line $y = x$ (if B0 then B1 for line $y=x$ drawn on diagram)
(b)	Triangle with vertices at (-1, 3), (-3, 3) and (-3,4)		2	M1 for correct orientation or for a rotation of 90° clockwise about (-1,1) A1 cao
20 (a)		-3,-2,-1,0,1	2	B2 cao (-1 each error or omission)
(b)	$3x < -6$	$x < -2$	2	M1 for subtracting $2x$ from both sides, condone sign error in 6 and use of $=, >, \leq, \geq$ A1 for $x < -2$, accept $x < -\frac{6}{3}$

