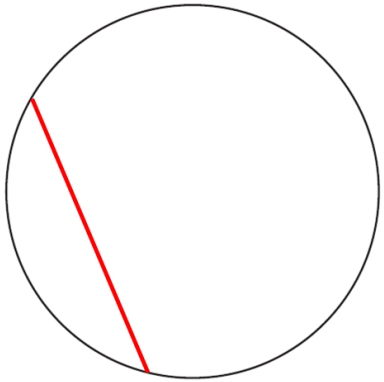
Year 11 Practice Paper 2F Calculator Mark Scheme

Question	Answer	Marks	Notes and guidance
1	Hexagon	1	
2	e.g. 	1	Accept any line segment that connects any two points on the circumference including a diameter
3	3 (24) 6 1 (60) (240)	2	Award 1 mark for two correct values circled.
4a	3500	1	
4b	3	1	
5a	66	1	
5b	28	1	
5c	$-\frac{11}{2}$	1	Accept -5.5 or $-5\frac{1}{2}$

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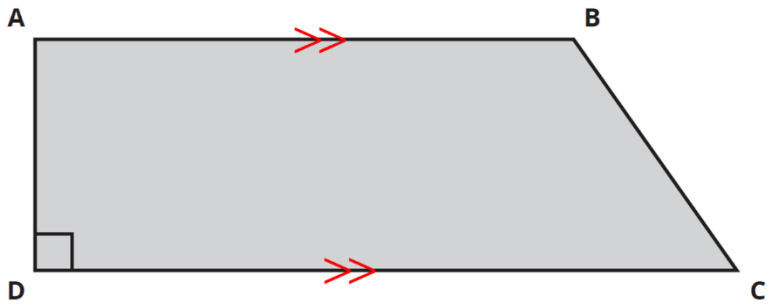
6a		1	Accept single arrows (>) on sides AB and DC
6b	AD	1	
7	£37.20	2	Award 1 mark for 6.2(0) × 6 seen or implied
8	40	1	
9	60%	1	Must include %
10	$\frac{1}{8}, \frac{4}{9}, \frac{1}{2}, \frac{2}{3}, \frac{5}{7}$	2	Award 1 mark for a correct method to make comparisons to order the fractions seen or implied e.g. common denominator, common numerator, converting into decimals OR for ordered from largest to smallest OR for correct list with one fraction misplaced
11a	15	1	
11b	32	1	
11c	1	1	

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<table>
<tr>
<td>12a</td>
<td>
<table>
<tr><th></th><th>French</th><th>Spanish</th><th>German</th><th>Total</th></tr>
<tr><td>Year 7</td><td>59</td><td>63</td><td>58</td><td>180</td></tr>
<tr><td>Year 8</td><td>56</td><td>19</td><td>40</td><td>115</td></tr>
<tr><td>Year 9</td><td>35</td><td>38</td><td>32</td><td>105</td></tr>
<tr><td>Total</td><td>150</td><td>120</td><td>130</td><td>400</td></tr>
</table>
</td>
<td>2</td>
<td>Award 1 mark for four correct values found</td>
</tr>
<tr>
<td>12b</td>
<td>120</td>
<td>1</td>
<td>Follow through from their answer to a</td>
</tr>
<tr>
<td>13a</td>
<td>
<table>
<tr><td>x</td><td>−2</td><td>−1</td><td>0</td><td>1</td><td>2</td></tr>
<tr><td>y</td><td>−4</td><td>−1</td><td>2</td><td>5</td><td>8</td></tr>
</table>
</td>
<td>2</td>
<td>Award 1 mark for 3 correct values</td>
</tr>
</table>

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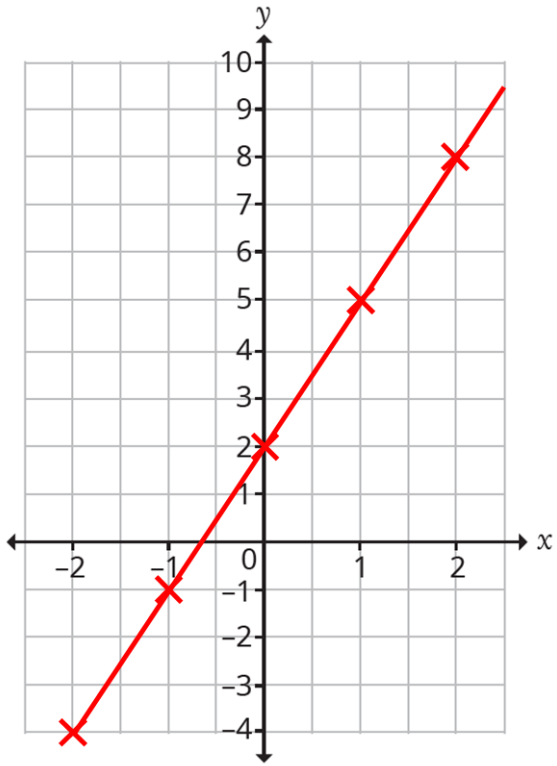
13b		2	Award 1 mark for their points from a) plotted correctly OR 4 out of the 5 points plotted and joined.
14a	51°	1	
14b	67°	2	Award 1 mark for 180 – 62 – "51" seen or implied
15	60 miles	2	Must include "miles" Award 1 mark a correct method seen e.g. 8 × 7.5 or implied
16a	5 : 6	2	Award 1 mark for a correct ratio formed e.g. 100 : 120

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16b	150	2	Award 1 mark for a correct method seen or implied e.g.100×1.5, $100 \div 8 \times 12$ etc.
17	e.g. 3 stone 10 lbs = 52 lbs $52 \div 2.2 = 23.63$ kg $23 < 25$ so No	4	Award 1 mark for a correct method seen or implied to convert stone into pounds e.g. 3 stone 10 lbs = 52 lbs Award 1 mark for a correct method seen or implied to convert pounds into kilograms e.g. "their 52" $\div 2.2 = 23.63$ Award 1 mark for correct comparison seen Award 1 mark for conclusion with supporting working. No marks for "No" with no working. Accept any correct alternative e.g. 25 kg $\times 2.2 = 55$ lbs 55 lbs = 3 stone 13 lbs 3 stone 13 lbs > 3 stone 12 lbs so no
18	25%	3	Award 1 mark for finding profit as a fraction e.g. $\frac{150\,000 - 120\,000}{120\,000}$ seen or implied Award 2nd mark for a full correct method to find percentage profit
19a	$3(2a + 1)$	1	
19b	$8p - 9$	2	Award 1 mark for two correct expansions $6p - 15 + 2p + 6$ or one term correct
20a	$(3, 2)$	1	

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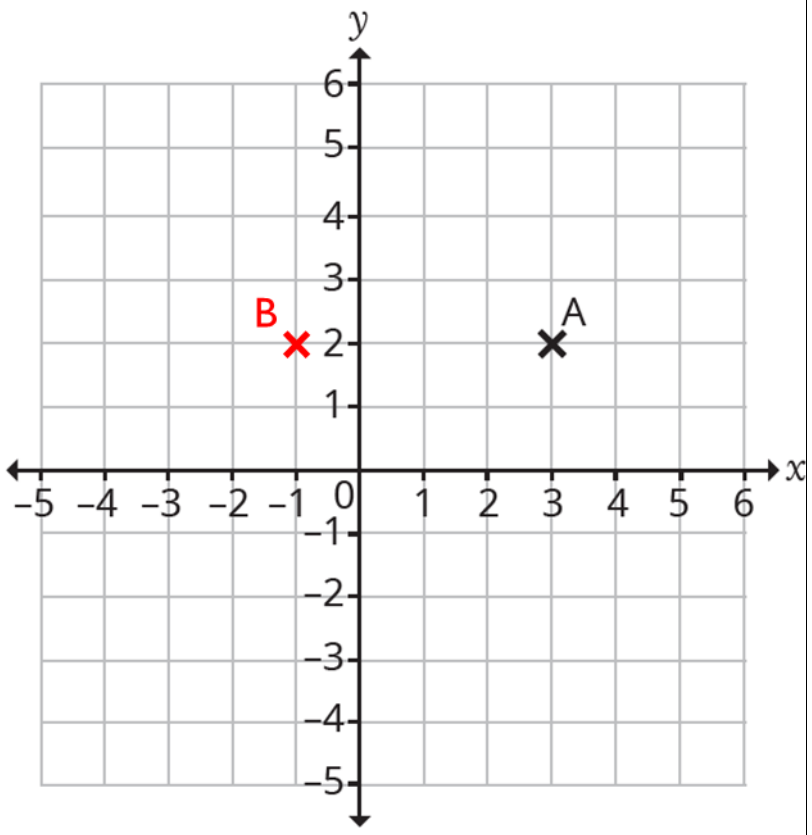
20b		1	Accept any clear indication
20c	$p = 1$	1	Accept 1
21a	y^6	1	
21b	$8z^{15}$	2	Award 1 mark for either a correct coefficient or power of z

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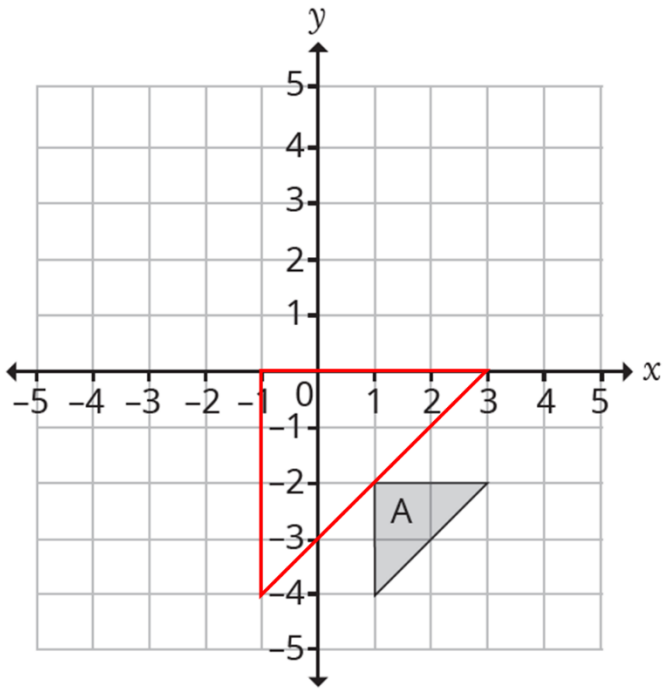
22	$x = 3, y = 5$	3	Award 1 mark for a correct method to eliminate x or y Award 2nd mark for one correct value found – must have evidence of working if only one value is correct.
23a		3	Award 1 mark for one side of the enlarged triangle correctly placed OR an enlargement from centre $(3, -4)$ with scale factor $\neq 2$ placed correctly. Award 2 marks for an enlargement with scale factor 2 positioned incorrectly.

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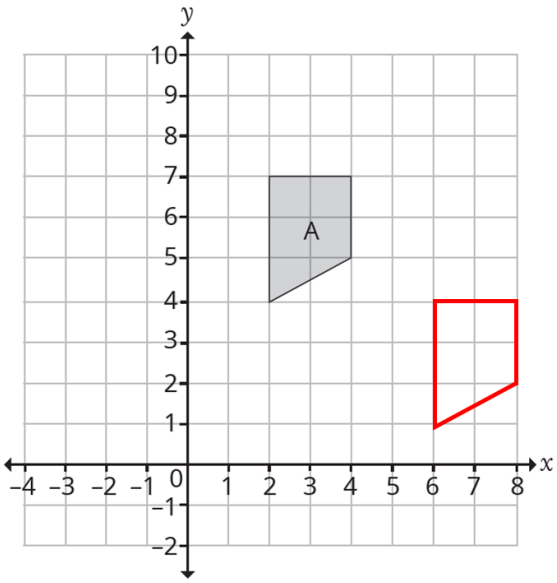
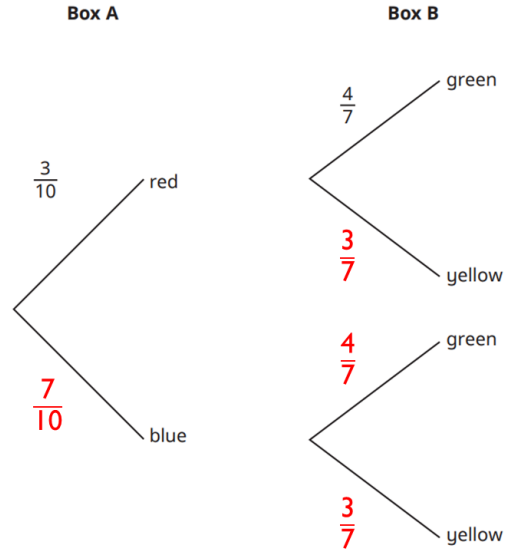
23b		2	Award 1 mark for either a correct horizontal or vertical translation of the trapezium.
24a		2	Award 1 mark for at least one of $\frac{7}{10}$ for blue or $\frac{3}{7}$ for yellow

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24b	$\frac{21}{70}$	2	Award 1mark attempt to find the product of P(blue) and P(yellow) e.g. $\frac{7}{10} \times \frac{3}{7}$ seen Accept any equivalent form.
25	5.2	3	Award 1 mark for using the midpoints of the class intervals to find the total e.g. $(1 \times 1) + (2 \times 3) + (4 \times 5) + (1 \times 7) + (2 \times 9)$, allow one error Award 2nd mark for dividing their total by 10
26	\$51.20 or £37.65	2	Award 1 mark for a correct method to convert dollar to pounds, or pounds to dollars, seen or implied e.g. 920×1.36 (= 1251.20) or $1200 \div 1.36$ (= 882.35)
27	£2152.96	3	Award 1 mark for a correct full method to reduce 2500 by 7.2% once seen or implied e.g. 2500×0.928 (= 2320) Award 2nd mark for a full correct method to find the price of the computer after 2 years seen or implied e.g. 2500×0.928^2 Condone missing £
28	216 cm^2	3	Award 1 mark for a correct method to find either side of a smaller rectangle e.g. $3x = 18$ seen or implied. Award 2nd mark for an attempt to find the area of any relevant rectangle Condone missing units cm^2

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29	75	3	Award 1 mark for $175 \div (5 + 2)$ Award 1 mark for $3 \times$ "$175 \div (5 + 2)$"
30	294 cm $\leq l <$ 295 cm	2	Award 1 mark for either end of the inequality correct OR both ends correct for rounding rather than truncation i.e. $293.5 \leq l < 294.5$ seen