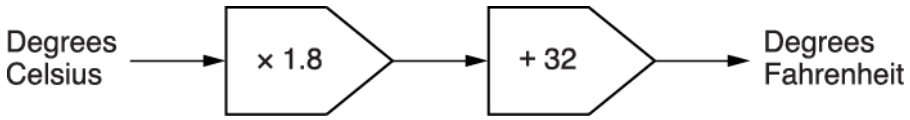
1(a). John and Michelle are going on holiday to Nice.

The temperature in Nice is 30° Celsius.
Michelle wants to know what this temperature is in degrees Fahrenheit.

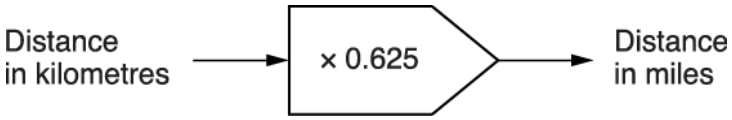
Use the rule to find 30° Celsius in degrees Fahrenheit.



_____ °F **[2]**

(b). The distance from London to Nice is 850 miles.

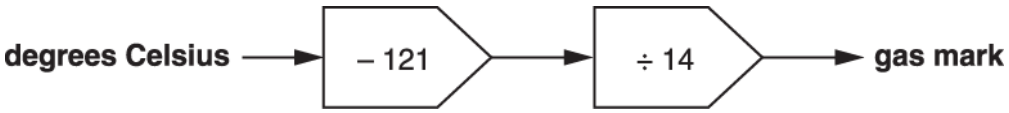
This rule converts a distance in **kilometres** to a distance in **miles**.



Work out the distance from London to Nice in **kilometres**.

_____ km **[1]**

2(a). Tony uses this rule to convert temperatures in degrees Celsius to a gas mark for his oven.



A recipe for roasting meat gives the temperature as 205°C.

Use the rule to work out the gas mark needed in this recipe.

(a) _____ [2]

(b). Use the rule to work out the temperature, in degrees Celsius, equivalent to gas mark 4.

(b) _____ °C [2]

(c). Using the rule above, which of the following formulas converts degrees Celsius, *C,* to a gas mark, *G*?
Circle the correct answer.

$G = 121 - 14C$

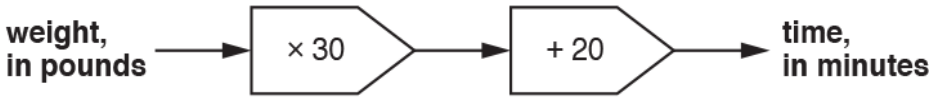
$G = \frac{C}{14} - 121$

$G = 14C - 121$

$G = \frac{C - 121}{14}$

[1]

3(a). This is a rule to find the time, in minutes, needed to roast lamb.



Use the rule to work out the time needed to roast a piece of lamb which weighs 4 pounds.

_____ minutes [2]

(b). A different piece of lamb takes 95 minutes to roast.

Use the rule to work out the weight of this piece of lamb.

_____ pounds [2]

END OF QUESTION PAPER

Question			Answer/Indicative content	Marks	Guidance
1	a		86	2	Mark final answer **M1** for 30 × 1.8 + 32 or 54 **seen** Examiner's Comments Most candidates had a good understanding of how to apply a flow chart and gained both marks.
	b		1360	1	Mark final answer Examiner's Comments It was pleasing to get so many correct solutions to this question. Dividing by a decimal does not come naturally to many students, but candidates knew that they had to reverse the flow chart and many gave the correct response. There were some who did not understand that the inverse was required and simply multiplied 850 by 0.625.
			Total	3	
2	a		6	2	**M1** for [205 -121] = 84 **seen** or 196.(…) **seen** Examiner's Comments Most candidates used the formula correctly to find the gas mark. Some candidates did not know how to use their calculator appropriately for this type of calculation and gave an incorrect answer of 196… for which they were given some credit.
	b		177	2	**M1** for 4 × 14 **soi** Examiner's Comments A majority of candidates successfully used a reverse process through the flow chart to convert the temperature to °Celsius.

Question			Answer/Indicative content	Marks	Guidance
	c		$G = \frac{C - 121}{14}$	1	Examiner's Comments It was pleasing to see that many candidates could identify the correct algebraic formula to represent the rule.
			Total	5	

Question			Answer/Indicative content	Marks	Guidance	
3	a		140 **isw**	2	**B1** for 120 **seen**	Accept 2 h[ours] 20 m[inutes]
	b		2.5 **oe**	2	**B1** for 75 **seen** or **M1** for *their* 75 ÷ 30 correctly evaluated	To 2 significant figures or better
					<u>Examiner's Comments</u> Many answered (a) correctly with a good amount of clear working. Errors arose from calculating 4 × 30 incorrectly or adding 120 + 20 incorrectly. In (b) most candidates were able to reverse the function machine to reach 75 ÷ 30, but very few were able to work this out correctly. Common incorrect answers resulting from this division were 25 and 2.15.	
			Total	4		