Question		Answer	Mark	Mark scheme	Additional guidance
22	(a)	4.5	P1	for a process to find the number of dark chocolates, eg $280 \times \dfrac{1}{7}$ oe (= 40)	
			P1	for a process to find one part of the ratio for milk chocolates to white chocolates eg $(280 - "40") \div (1 + 3)$ (= 60)	
			P1	for process to find the number of white chocolates, eg "60" × 3 (= 180) or $280 - "40" - "60"$ (= 180)	Condone milk, white incorrectly labelled
			P1	for a ratio of white chocolates : dark chocolates eg "180" : "40" oe or for a process to find the value of n eg "180" ÷ "40"	Labels not required for this mark, but if seen must be correct Must be a 2-part ratio. Allow "40" : "180" if labelled as dark chocolate : white chocolate oe
			A1	(dep P3) for 4.5 oe	A correct answer with no supportive working gets 0 marks Condone answer of 4.5:1
	(b)	No with reason	C1	for No with reason **Acceptable examples** No, the number of dark chocolates and white chocolates has not changed No, the ratio of n:1 only involved white and dark chocolates No, eating milk chocolates doesn't change the rest No, the ratio of dark to white chocolates doesn't change. **Not acceptable examples** Yes,… No, it doesn't matter how many milk chocolates are eaten No, the number of white chocolates doesn't change No, the number of dark chocolates doesn't change	Reason must refer to or imply both dark and white chocolates