1 (a)		Explanation	C1	eg States over-estimated for both values
(b)		182.7(0)	P1	for a process to find 10% of a value stated in the question eg $\frac{10}{100}$ ×5.80 (=0.58) **or** $\frac{10}{100}$ × 35 (=3.5) oe **or** 35 × 5.80 (=203), allow 30 × 5.80 (=174) **or** 35 × [reduced price]
			P1	for a process to find 90% of a value stated in the question eg 35 – "3.5" (=31.5) **or** 0.9 × 5.80 (=5.22) oe **or** $\frac{10}{100}$ × "203" (=20.3) **or** $\frac{10}{100}$ × "174" (=17.4) oe
			P1	for a complete process to find actual cost of 35 eg 0.9 ×5.80 × 35 oe
			A1	cao
				SC B2 156.6(0)

2		4	M1	for a complete method eg 2.80 × 100 ÷ (100−30) oe **or** 2.80 ÷ 0.7 oe **or** for build up method but must show all intermediate steps unless all figures are correct eg 2.8 ÷ 7 = 0.4 and "0.40" × 10 (=4)
			A1	cao

3		988	P1	for a process to find the amount of oil bought in November, eg 750 ÷ 0.5 (=1500) or 75000 ÷ 50 (=1500)
			P1	for a process to find the amount of oil ordered in February, eg "1500" +1000 − 600 (= 1900)
			P1	(indep) for a process to calculate a 4% increase of their amount of oil, eg or "1900" × 1.04 (=1976) or increase in price eg 1.04 × 50 (=52 or 0.52) or 1.04 × 750 (=780)
			P1	for a complete process to find the total cost of the calculated amount of oil eg "52" × "1900" or "780" × "1900" ÷ "1500"
			A1	Cao

4	£6 − £5.64 = 36p or 50p – 47p = 3p	6.4	P1	for a strategy to compare the same number of bottles e.g. £5.64 ÷ 12 (= 47 or 0.47) or 12 × 50p (= 6 or 600) or 36 or 0.36 or 3 or 0.03
			P1	for start of process to find percentage profit e.g. $\frac{"36"}{564}$ or $\frac{"3"}{"47"}$ or $\frac{"6"}{5.64}$ or $\frac{50}{"47"}$ oe with consistent units
	6.3829787…%		A1	for answer in the range 6.3 to 6.4

5		Offer 1	P1	for a process to find the cost of a number of lessons in Offer 1, eg. 24 × (12 – 1) (= 264) or for a process to find 5% (or 95%) of an appropriate amount, eg. 24 × 0.05 (= 1.20) or 24 × 0.95 (= 22.80) in Offer 2
		(supported)	P1	for a complete process leading to values to be used for comparison, eg. 24 × (12 – 1) (= 264) and 24 × 0.95 × 12 (= 273.60)
			C1	Offer 1 and correct values, eg. (£)264 and (£)273.6(0) used for comparison

6	30	P1	for full process to find the number of bags sold eg 5 × 1000 ÷ 250 (= 20) **OR** for process to find selling price of 1 kg of sweets eg 0.65 × 4 (= 2.60)	This could be by repeated addition Calculations can be in £ or pence
		P1	for [number of bags] × 0.65 **or** "20" × 0.65 (= 13) **or** "2.60" × 5 (= 13) **OR** for 10 ÷ "20" oe (= 0.50) **OR** for 0.65 × 4 (= 2.60) **and** 10 ÷ 5 (= 2)	[number of bags] can only come from 5 × 10 ÷ 250 (= 0.2) or 5 × 100 ÷ 250 (= 2) or 5 ÷ 250 (= 0.02)
		P1	(dep on previous P1) for a process to find the percentage profit eg ("13" – 10) ÷ 10 × 100 **or** (0.65 – "0.50") ÷ "0.50" × 100 **or** ("2.60" – "2") ÷ "2" × 100 **OR** "13" ÷ 10 ×100 (= 130) oe	3/10 or 0.3 is not enough but should be awarded 2 marks Award P3 for 130(%)
		A1	cao	

7		No (supported)	P1	For a process to calculate the initial or new pressure, eg (70 +10) ÷ (20+10) (=2.6 to 2.7) **or** 80 ÷ 30 (=2.6 to 2.7) **or** 70 ÷ 20 (=3.5)	Accept any value in the range 2.6 to 2.7 if unsupported by working
			P1	For a complete process to make a comparison eg. 0.8 × "3.5" (=2.8) **OR** $\frac{("3.5"-"2.6")}{"3.5"} \times 100$ (=22 to 26) **OR** "3.5" × 0.2 (=0.7) **and** 80 ÷ 30 (=2.6 to 2.7) **OR** $\frac{"2.6"}{"3.5"}$ (× 100) (=0.74 to 0.78 **or** 74 to 78)	
			A1	for a correct conclusion supported by accurate figures eg 2.8 **and** 2.6(6…) **OR** decrease is 24% (or 22% to 26%) **OR** 0.7 **and** 2.6 to 2.7 **and** 3.5 **OR** 0.7 **and** 0.9 **OR** 0.76 (or 0.74 to 0.78) **OR** 76% (or 74% to 78%)	Allow truncation or rounding of figures

8	No (supported)	P1	for start to process, eg 2100 × $\frac{40}{100}$ (= 840) **or** 100 – 40 (= 60)	May compare bonus shares of a single salesman or total bonus share for all 7 salesmen.
		P1	for process to find the 7 salesmen's share of bonus, eg 2100 – "840" (= 1260) **or** 2100 × $\frac{"60"}{100}$ (= 1260)	
		P1	for process to find bonus amount each salesman gets eg "1260" ÷ 7 (= 180) **OR** process to find the total bonus for all salesmen if shared equally, eg $\frac{2100}{10}$ × 7 (= 1470)	
		P1	for process to compare what a single salesman gets under each scheme, eg "180" × $\frac{25}{100}$ (= 45) and "$\frac{2100}{10}$" – "180" (= 30) **or** "180" × $\frac{25}{100}$ (= 45) and "180" + "45" (= 225) oe and $\frac{2100}{10}$ (= 210) **or** ($\frac{2100}{10}$ – "180") ÷ "180" × 100 (= 16.6...) **OR** process to compare what all salesmen gets under each scheme, eg "1260" × $\frac{25}{100}$ (= 315) and "1470" – "1260" (= 210) **or** "1260" × $\frac{25}{100}$ (= 315) and "1260" + "315" (= 1575) oe and "1470" **or** ("1470" – "1260") ÷ "1260" × 100 (= 16.6...)	
		A1	'No' supported by correct figures, eg 45 and 30, 225 and 210, 315 and 210 **or** 1575 and 1470 **or** 16.(6...)(% and 25%)	Do not award unless correct figures have been shown to support a statement made that the salesman was not correct.

9	243	M1	for 1.8 ÷ 100 × 4500 oe (= 81) **or** for a complete method eg 4500 ×1.8 × 3 ÷ 100 oe **or** for 4743 **or** 4257	Award M1 for 4500 × 1.018^n
		A1	cao	

10	Shown (supported)	M1	for substitution eg 4 × 110 ÷ 12	
		A1	for 452	
		M1	(dep M1) for method to find value(s) needed for comparison eg $\frac{"452"-442}{442} \times 100$ **OR** $\frac{5}{100} \times 442$ oe (= 22.1) **and** "452" – 442 (= 10) **OR** $\frac{5}{100} \times 442 + 442$ oe (= 464.1) **and** "452"	
		C1	shown with correct comparable values eg 2.2(6...)(%) **OR** 22.1 **and** 10 **OR** 452 **and** 464.1	

11	8	M1 M1 A1	for 158220 – 146500 (=11720) **or** 158220 ÷ 146500 (=1.08) for complete method, eg (158220 – 146500) ÷ 146500×100 oe **or** 1.08×100 – 100 cao	0.08 as an answer implies M1

12	20	P1 P1 A1	for process to find SP of 24 chocolate bars, eg. 0.50 × 24 (= 12) oe **or** for process to find the overall profit eg (24 × 0.5) – 10 (=2) **or** for process to find CP of one chocolate bar, eg. 1000 ÷ 24 (= 41.66…) oe (dep) for start to a process to find percentage profit, eg. using $\frac{"12"-10}{10}$ **or** $\frac{"12"}{10}$ **or** $\frac{50-"41.66.."}{"41.66..."}$ oe with consistent units cao	Working can be carried out in either pounds or pence.

13	No (supported)	P1 P1 P1 P1 C1	for 3000 ÷ (2 + 3) (= 600) for "600" × 2 (= 1200) **or** "600" × 3 (= 1800) **or** "600" ÷ 6 (= 100) **or** "600" ÷ 20 (= 30) for "1200" ÷ 6 (= 200) **or** "1800" ÷ 20 (= 90) **or** "100" × 2 (= 200) **or** "30" × 3 (= 90) for "90" ÷ ("200" + "90") × 100 (= 31.0...) oe **or** "90" ÷ ("200" + "90") (= 0.31...) **or** 0.3 × ("200" + "90") (= 87)oe correct conclusion **and** fully correct calculations with accurate figure eg No and 87 **or** No and 31% **or** No and 0.31	 Full method to compare No may be implied by a statement No working, answer only no marks

14 (a)	140	M1 A1	for complete method eg 56 ÷ 40 × 100 cao	May be seen in different ways, eg 2.5 × 56
(b)	32	M1 A1	for method to find percentage, eg $\frac{18}{56} \times 100$ (=32.14…) for an answer in the range 32 to 32.2	