Q1. (2019)

18 Here is an identity.

$$x^2 - y^2 \equiv (x + y)(x - y)$$

18(a)	(193 + 7)(193 – 7) or (200)(186) or 200 (×) 186	M1	either order
	(200)(186) = 37 200 or 200 (×) 186 = 37 200	A1	
	Additional Guidance		
	37 200 with correct method not seen		M0A0
	37 200 from 37 249 – 49 only		M0A0
	37 200 from (200)(186) or 200 (×) 186 and 37 249 – 49 also given		M1A1
	Do not award M1 for a 'misread' eg (193 + 2)(193 – 2)		M0A0

Q2. (2024)

Q	Answer	Mark	Comments
21	**Alternative method 1: using $x = 1.018\ldots$**		
	Multiplication by power of 10	M1	eg $10x = 10.18\ldots$ or $100x = 101.81\ldots$ or $1000x = 1018.18\ldots$ any or no letter
	Correct equation formed from subtraction of two equations to eliminate recurring digits	M1dep	eg $99x = 100.8$ or $990x = 1008$ or $x = \frac{1008}{990}$
	$(x =)\ \frac{1008}{990}$ and $\frac{56}{55}$ with no incorrect working	A1	oe from using different powers of 10
	Alternative method 2: using $x = 0.018\ldots$		
	Multiplication by power of 10	M1	eg $10x = 0.1818\ldots$ or $100x = 1.818\ldots$ or $1000x = 18.18\ldots$ any or no letter
	Correct equation formed from subtraction of two equations to eliminate recurring digits	M1dep	eg $99x = 1.8$ or $990x = 18$ or $x = \frac{1.8}{99}$
	$(x =)\ \frac{1.8}{99}$ or $\frac{18}{990}$ and $(x =)\ \frac{1}{55}$ and $\frac{56}{55}$ **or** $\frac{100.8}{99}$ or $\frac{1008}{990}$ **and** $\frac{56}{55}$ with no incorrect working	A1	oe from using different powers of 10

Q	Answer	Mark	Comments
21 cont	**Alternative method 3: using $x = 1.018\ldots$ and addition**		
	Multiplication by power of 10	M1	eg $10x = 10.18\ldots$ or $100x = 101.81\ldots$ or $1000x = 1018.18\ldots$ any or no letter
	Correct addition of two correct equations leading to 0.9 recurring	M1dep	eg $110x = 111.99\ldots$ or $1100x = 1119.99\ldots$
	$(x =)\ \frac{112}{110}$ and $\frac{56}{55}$ with no incorrect working	A1	oe from using different powers of 10
	Additional Guidance		
	Up to M2 may be awarded for correct work with no answer or incorrect answer if this is seen amongst multiple attempts		
	For all marks, numbers must be correct		
	Working with 1.018018018… scores 0		
	Recurring decimals should be denoted by correct notation or at least two of the recurring digits followed by at least two dots		
	In alt1 and alt2 condone incorrect recurring notation if the result of the subtraction is a correct equation		