

Q1. (2018)

20	$(\sqrt{121}=) 11$ or -11 or $121 = 11^2$ or $121 = 11 \times 11$ seen	B1	oe
	$13 - 10$ or 3 or $(13 - 10)^2$ or 3^2 or 3×3 or 9	M1	
	2 or -20	A1ft	ft their 11
	Additional Guidance		
	Accept 2 and -20		B1M1A1ft
	$11 - 16^2$ or $11 - 256$ or -245		B1M0A0
	$11 \times 9 = 99$		B1M1A0
	$\sqrt{121} = 60.5$, $60.5 - 3^2 = 51.5$ $60.5 - 3^2 = 51.5$		B0M1A1ft B0M1A0ft

Q2. (2018)

12(a)	$(16.4 - 3.92 =) 12.48$ or $(16.4 + 7.8 =) 24.2$ or $(7.8 - 3.92 =) 3.88$	B1	
	20.28	B1ft	ft their $12.48 + 7.8$ or their $24.2 - 3.92$ or their $3.88 + 16.4$ SC1 4.68
	Additional Guidance		
	Answer of 20.28		B1B1
	4.68 comes from $16.4 - (3.92 + 7.8)$		SC1
	-4.68		SC0
	Follow through must have at least 1 decimal place eg $16.4 - 3.92 = 12$ then $12 + 7.8 = 19.8$ eg $16.4 - 3.92 = 12.58$ then $12.58 + 7.8 = 20.38$		B0B0ft B0B1ft

Q3. (2018)

12(b)	406.23	B2	Ignore further work e.g rounding B1 $400 \leq \text{answer} < 410$ B1 digits 40 623 (not 406.23)
	Additional Guidance		
	0406.23		B2
	Ignore trailing zeros eg 406.230000		B2
	406.23 in division calculation and 406 on answer line		B2
	406.23 in division calculation and 46.23 on answer line cannot be considered a transcription error and cannot be ignored as further work		B1

Q4. (2019)

23	$(3^{12} \Rightarrow) 531441$ or $(3^5 \Rightarrow) 243$ or $(3^{12} \div 3^5 \Rightarrow) 3^7$ or $(3^{12} \div 3^5 \Rightarrow) 2187$ or $(3^2 \times 3 \Rightarrow) 3^3$ or $(3^2 \times 3 \Rightarrow) 27$ or $3^{12} \div 3^5 \div 3^2 \div 3$ or $\frac{3^{12}}{3^5} \times \frac{1}{3^2 \times 3}$	M1	
	$3^7 \div 3^3$ or $3^7 \div 27$ or $3^{(12-5-2-1)}$ or $\frac{3^{12}}{3^8}$ or 3^4 or $2187 \div 27$	M1dep	oe in the form $3^n \div 3^{(n-4)}$
	81	A1	
	Additional Guidance		
	3^4 and 81 on the answer line in either order		M1M1A1
	81 in working and 3^4 on the answer line		M1M1A0

Q5. (2020)

Q	Answer	Mark	Comments
7	344	B1	
	39	B1	
	305	B1ft	ft their 344 – their 39 if either B1B0 or B0B1 awarded
	Additional Guidance		
	If their division results in a decimal answer, allow correct rounding to 0dp or better for the B1ft eg $234 \div 6 = 38.333$, $344 - 38.3 = 305.7$ (may have answer 306) eg $344, 234 \div 6 = 20.3$, answer 324		B1B0B1ft B1B0B1ft
	Negative, fractional and decimal answers are acceptable on ft		

Q6. (2022)

Q	Answer	Mark	Comments
6(a)	20 or 19 and no incorrect evaluations and 3rd box indicated	B2	oe eg 30 and 29 and no incorrect evaluations and 3rd box indicated B1 20 or 19 or incorrect values seen and correct box indicated for their values SC1 3rd box indicated but no evaluations seen
	Additional Guidance		
	14 and 39 and 1st box indicated		B1
	Ignore any incorrect statements such as $20 < 19$ if the correct box is ticked as they may be checking each statement		

Q7. (2023)

Q	Answer	Mark	Comments
10	$(A \Rightarrow) 26$	B1	may be implied by correct answer
	$(B \Rightarrow) 10$	B1	may be implied by correct answer
	260	B1ft	ft their A $\times$ their B if at least B1 awarded SC2 400 or 52 SC1 55
	Additional Guidance		
	SC2 400 from $A = 40$ and $B = 10$		
	SC2 52 from $A = 26$ and $B = 2$		
	SC1 55 from $8 \times 3 + 2 \times 21 - (15 - 4)$		
	Answer 260 with no incorrect values seen for A and B		B1B1B1