

Q1. (2017)

18	6.005 2(00) $\times 10^6$	B2	B1 for their 6 005 200 written normally and correctly converted to standard form or no number written normally and answer 6.(...) $\times 10^6$
	Additional Guidance		
	(6 500 200 and) 6.500 2(00) $\times 10^6$		B1
	65 200 and 6.52 $\times 10^4$		B1
	$10^6 \times 6.005 2(00)$		B2
	Correct value of 6 005 200 with no conversion to standard form		B0
	6 $\times 10^6$ with no number written normally		B1

Q2. (2018)

32	One correct conversion to a comparable form 0.08×10^{-2} or 0.0008 400×10^{-4} or 0.04 0.06×10^{-2} or 0.0006 7×10^{-2} or 700×10^{-4}	M1	
	6×10^{-4} 8×10^{-4} 4×10^{-2} 0.07 with no clearly incorrect working	A1	oe accept in converted form
	Additional Guidance		
	Correct answer from clearly incorrect working		A0
	Accept numbers with two decimal points if it is clear that the point has been moved to the correct place eg 0.0008.0 with curved lines between each place value between the decimal points		
	If the numbers are converted into fractions, at least two must be given correctly with common denominators to score the first mark eg $\frac{4}{100}$ and $\frac{7}{100}$ eg $\frac{6}{1000}$ and $\frac{8}{1000}$ only eg $\frac{6}{10\,000}$ and $\frac{7}{100}$ only		M1 M0 M0

Q3. (2019)

20(a)	9.7×10^{-4}	B1	
	Additional Guidance		
	Condone $9.7 \cdot 10^{-4}$ or $9.7 \cdot 10^{-4}$		B1
	Ignore zeroes before the '9' eg 00009.7 $\times 10^{-4}$		B1
	$9.7 \times 10^{4-}$		B0

Q4. (2019)

20(b)	300 000 and 4000 or $(10^5 \div 10^3) = 10^2$ or $(10^5 \div 10^3) = 100$ or $7.5 \times 10^{(1)}$ or 75×10^0 or $\frac{3 \times 10^2}{4}$ or $\frac{300}{4}$	M1	
	75	A1	
	Additional Guidance		
	If the answer is given in standard form and as 75 the student must indicate that 75 is their chosen answer or it must be the final answer given eg1 $7.5 \times 10^{(1)} = 75$ on the answer line eg2 $75 = 7.5 \times 10^{(1)}$ on the answer line		M1A1 M1A0
	$\frac{300}{4}$ or 75 from incorrect working scores zero eg1 $3 \times 10^5 = 30\,000$ and $4 \times 10^3 = 400$ and $30\,000 \div 400 = \frac{300}{4} = 75$ eg2 $\frac{30\,000}{400} = 75$		M0A0 M0A0
	For the method mark, ignore incorrect work from a correct expression eg $0.75 \times 10^2 = 7.5 \times 10^3$		M1A0
	If the student attempts two methods (simplifying the powers and attempting to convert to ordinary numbers) mark both methods and award the higher mark		

Q5. (2020)

Q	Answer	Mark	Comments
29(a)	3.6×10^5	B1	
	Additional Guidance		
	Do not ignore further work		
	Ignore leading/trailing zeros eg 3.60000×10^5		B1
	Condone $10^5 \times 3.6$		B1
	$3.6 + 10^5$		B0

Q6. (2020)

Q	Answer	Mark	Comments
29(b)	0.0092	B1	
	Additional Guidance		
	Do not ignore further work		
	Ignore additional zeros before the decimal point or after the 2		
	Accept .0092		B1
	0.009.2		B0

Q7. (2021)

Question	Answer	Mark	Comments
27(a)	2×10^3 or 7×10^4 or 140 000 000	M1	oe correct value not in standard form eg 14×10^7
	1.4×10^8	A1	SC1 Correctly converts an ordinary number with at least four digits to standard form
	Additional Guidance		
	Condone extra zeros on 1.4 eg $1.40\,000\,000 \times 10^8$		M1A1
	1.4×10^8 from 1400 000 000		M0A0
	2×10^3 is implied by $(2 \times 7) \times (10^3 \times 10^0)$ 7×10^4 is implied by $(2 \times 7) \times (10^6 \times 10^4)$		M1
	1400 000 000 converted to 1.4×10^9		SC1

Q8. (2021)

Question	Answer	Mark	Comments
27(b)	180 or 0.3 or ($1.8 \div 3 =$) 0.6 or ($10^2 \div 10^{-1} =$) 10^3 or calculation which would have the outcome 600 or correct value not given as an ordinary number	M1	eg $1800 \div 3$ eg 6×10^2
	600	A1	
	Additional Guidance		
	1800 $\div$ 0.3 = 600 scores M1 only, as 600 comes from incorrect working		M1A0
	1800 $\div$ 30 = 600 scores zero, as 600 comes from incorrect working		MOA0

Q9. (2022)

Q	Answer	Mark	Comments
18	4×10^5	B2	B1 400 000 oe correct answer not in standard form eg 40×10^4 or 8×10^7 or 2×10^2 or $8 \times 10^5 \div 2$ or $4 \times 10^7 \div 100$ or any value seen and then correctly converted to standard form eg 4 000 000 and 4×10^6 40 000 and 4×10^4
	Additional Guidance		
	Ignore incorrect position of commas or spacing in long numbers		
	Condone 400 000 and 4×10^5 on the answer line, in either order		B2
	Condone 40 000 and 4×10^4 on the answer line, in either order		B1
	400 000 only on the answer line		B1
	Do not award both marks for the correct answer from incorrect working but B1 can be awarded for one or both numbers incorrectly converted to standard form and the result of their division given correctly in standard form eg $(8 \times 10^8) \div (2 \times 10^3) = 4 \times 10^5$ eg $(0.8 \times 10^7) \div (2 \times 10^3) = 4 \times 10^5$		B1 B0
	Condone a decimal point and any number of zeros after 4 eg 4.00000×10^5		B2
	8×10^7 is implied by $(8 \div 2) \times (10^7 \div 10^0)$ or condone $(8 \div 2) \times (10^7 \times 10^0)$		B1
	2×10^2 is implied by $(8 \div 2) \times (10^6 \div 10^2)$ or condone $(8 \div 2) \times (10^6 \times 10^2)$		B1