Stage 6: Numbers and the number system   Quest

It's not quite a quiz, it's not quite a test

1	**Write and read numbers up to and including 10 000 000**	
a	Write the following number using numerals: Four million, seven hundred and twenty one thousand, five hundred and nine	
b	Sam is asked to write the number 6 043 501 in words. He writes *Six million, four hundred and thirty thousand, five hundred and one* Sam is wrong. Explain why.	

2	**Compare and order numbers up to and including 10 000 000**	
a	Write these numbers in order of size, starting with the smallest: 5 055 505 5 505 555 5 050 555 5 500 000 5 500 555	
b	Erica writes 718 033 < 781 033 Do you agree? Explain your answer.	

3	**Multiply numbers by 10**	
a	5.69×10	
b	Lyndsey writes $6.5 \times 10 = 6.50$ Do you agree? Explain your answer.	

4	**Multiply numbers by 100**	
a	100×234.701	
b	Robert writes $41.75 \times 100 = 4100.75$ Robert is wrong. Explain why.	

5	**Multiply numbers by 1000**	
a	0.00235×1000	
b	Keith writes $1000 \times 73.2 = 73.2 \times 1000$ Do you agree? Explain your answer.	

6	**Divide numbers by 10**	
a	$0.06 \div 10$	

b	Claire writes	
	$$10 \div 56\ 000 = 5600$$	
	Claire is wrong. Explain why.	

7	**Divide numbers by 100**	
a	408.22÷ 100	
b	Owen writes	
	$$30\ 417 \div 100 = 304.17$$	
	Do you agree? Explain your answer.	

8	**Divide numbers by 1000**	
a	17.94 ÷ 1000	
b	Graham writes	
	$$0.000\ 003 \div 1000 = 0.000\ 3$$	
	Graham is wrong. Explain why.	

9	**Understand and use negative numbers when working in context, such as temperature**	
a	Write these temperatures in order of size, starting with the coldest:	
	9°C -5°C -12°C 0°C 5°C -4°C	
b	At midnight, the temperature is -3°C. By midday, the temperature has risen by 10°C.	
	Jordan thinks that the temperature at midday must be 13°C. Do you agree? Explain why.	

10	**Calculate intervals across zero**	
a	5 – 12	
b	Saad writes	
	$$4 – 11 = -7$$	
	Do you agree? Explain your answer.	

11	**Find common multiples of two numbers**	
a	Find a common multiple of 6 and 10	
b	Malachi thinks that 40 is a common multiple of 8 and 10. Do you agree? Explain why.	

12	**Find common factors of two numbers**	
a	Find all the common factors of 18 and 30	
b	Jadzia thinks that 40 is a common factor of 8 and 10. Do you agree? Explain why.	

	Key learning point	☹	😐	🙂	😊
1	Write and read numbers up to and including 10 000 000				
2	Compare and order numbers up to and including 10 000 000				
3	Multiply numbers by 10				
4	Multiply numbers by 100				
5	Multiply numbers by 1000				
6	Divide numbers by 10				
7	Divide numbers by 100				
8	Divide numbers by 1000				
9	Understand and use negative numbers when working in context, such as temperature				
10	Calculate intervals across zero				
11	Find common multiples of two numbers				
12	Find common factors of two numbers				

Top three improvements for me to make

1a	4 721 509	
1b	e.g. it should be forty three thousand, not four hundred and three thousand	
2a	5 050 555 5 055 505 5 500 000 5 500 555 5 505 555	
2b	Yes, and reason	
3a	56.9	
3b	No, and explanation	
4a	23 470.1	
4b	Reason	
5a	2.35	
5b	Yes, and explanation	
6a	0.006	
6b	Order of division is wrong	
7a	4.0822	
7b	Yes, and reason	
8a	0.01794	
8b	Reason	
9a	-12°C, -5°C, -4°C, 0°C, 5°C, 9°C	
9b	No, the answer should be 7°C	
10a	-7	
10b	Yes, and reason	
11a	Any multiple of 30	
11b	Yes, and reason	
12a	1, 2, 3, 6	
12b	No, and reason	