

# Maths Workout - Number

Topic 26 - Standard Form				
Target 1	Target 2	Target 3	Target 4	Target 5
<i>Convert numbers greater than 1 between ordinary notation and standard form</i>	<i>Express numbers less than 1 in standard form</i>	<i>Expand standard form to ordinary notation; numbers &lt; 1</i>	<i>Multiply and divide numbers in standard form without a calculator</i>	<i>Add and subtract numbers in standard form without a calculator</i>
1. Engage with the pattern of indices by expressing a sequence of multiples of 10 in index form	1. Engage with the pattern of indices by expressing a sequence of decimal fractions in index form	1. Expand standard form for negative indices; single digit whole numbers	1. Multiply 2 numbers in standard form; $(a \times 10^n) \times (b \times 10^m)$ : $a \times b < 10$	1. Add 2 numbers in standard form with the same index; $(a \times 10^n) + (b \times 10^m)$ : $a + b < 10$
2. Express a number $> 1$ with a single non-zero digit in standard form; with assistance	2. Express a number $< 1$ with a single non-zero digit in standard form; with assistance	2. Expand standard form for negative indices; 2-digit numbers with 1 dp	2. Convert a number in scientific notation to correct standard form	2. Add 2 numbers in standard form with the same index; $(a \times 10^n) + (b \times 10^m)$ : $a + b$ maybe $\geq 10$
3. Express a number $< 1$ with 2 non-zero digits in standard form; with assistance	3. Express a number $< 1$ with 2 non-zero digits in standard form; with assistance	3. Expand standard form for negative indices; 3-digit numbers with 2 dp; includes zero as middle digit	3. Multiply 2 numbers in standard form; $(a \times 10^n) \times (b \times 10^m)$ : $a \times b$ maybe $> 10$	3. Add 2 numbers in standard form; $(a \times 10^n) + (b \times 10^m)$ : $a + b$ maybe $\geq 10$ ; $ n-m  = 1$
4. Express a number $> 1$ with 2 non-zero digits in standard form	4. Express a number $< 1$ with 2 non-zero digits in standard form	4. Express standard form as thousands, millions, billions, etc	4. Multiply 2 numbers in standard form; $(a \times 10^n) \times (b \times 10^m)$ : $a \times b$ maybe $> 10$ ; a or b has 1 dp	4. Add 2 numbers in standard form; $(a \times 10^n) + (b \times 10^m)$ : $a + b$ maybe $\geq 10$ ; $ n-m  = 2$
5. Express a number $> 1$ with 2 or 3 non-zero digits in standard form	5. Express a number $< 1$ with 2 or 3 non-zero digits in standard form		5. Raise a number in standard form to a power and rewrite in standard form	5. Subtract 2 numbers in standard form with the same index; $(a \times 10^n) - (b \times 10^m)$ : $a - b > 0$
6. Express a large number given as thousands, millions, billions in standard form	6. Express a small number given as thousandths, millionths, billionths in standard form		6. Divide 2 numbers in standard form; $(a \times 10^n) / (b \times 10^m)$ : $a / b > 1$	6. Subtract 2 numbers in standard form with the same index; $(a \times 10^n) - (b \times 10^m)$ : $a - b > 0$ ; $ n-m  < 3$
7. Expand standard form; single digit whole numbers $\geq 1$			7. Divide 2 numbers in standard form; $(a \times 10^n) / (b \times 10^m)$ : $a / b$ maybe $\leq 1$	
8. Expand standard form; 2-digit numbers with 1 dp $> 1$				
9. Expand standard form; 2 or 3-digit numbers with 1 or 2 dp $> 1$				
10. Express standard form as thousands, millions, billions, etc				
11. Convert between standard form and ordinary form in context				