POWERS OF TEN

I can explain patterns in the number of zeros in a product when multiplying a number by a power of 10. I can use whole number exponents to stand for powers of 10.

EXPONENT

the number that tells the number of times the base number is multiplied by itself.

Exponent

$$2^3$$

Base

$$2 \times 2 \times 2 = 8$$

POWERS OF TEN

using a base number of 10 with an exponent.

Powers of 10	Equal factors	Easy way to calculate	Product (answer)
10^1	10	1 with no 0	10
10^2	10×10	1 with 2 zeros	100
10^3	$10 \times 10 \times 10$	1 with 3 zeros	1000
10^4	$10 \times 10 \times 10 \times 10$	1 with 4 zeros	10.000

Write the equal factors and the product	Find the **product** (look for the pattern)
10^5 _____ _____	$23 \times 10 =$ _____ $23 \times 100 =$ _____ $23 \times 1000 =$ _____
10^7 _____ _____	$56 \times$ _____ $= 5600$ _____ $\times 10 = 150$ $45 \times$ _____ $= 45000$