6.NS Tenths of (and So On)

Task

Since $0.1 = \frac{1}{10}$, when we multiply by 0.1, we are multiplying by one-tenth.

a. Multiply:

- $0.1 \times 100$
- $0.1 \times 10$
- $0.1 \times 1$
- $0.1 \times 0.1$
- $0.1 \times 0.01$
- $0.1 \times 0.001$

b. Describe the patterns you see in the products above.

Similarly, since $0.01 = \frac{1}{100}$, when we multiply by 0.01, we are multiplying by one-thousandth.

c. Multiply:

- $0.01 \times 100$
- $0.01 \times 10$
- $0.01 \times 1$
- $0.01 \times 0.1$
- $0.01 \times 0.01$
- $0.01 \times 0.001$

d. Describe the patterns you see in the products above.
Based only on the patterns above, what do you expect $0.0001 \times 0.00001$ to be? Explain why that must be true by thinking of these decimals as fractions.