

$$10^2$$

1. What patterns do you notice?
2. Write 1,000,000 as a power of ten.
3. Multiply 1,000,000 times 1,000,000.
 - a. Express the answer as a power of ten.
 - b. Write 1,000,000 times 1,000,000 as the multiplication of powers of 10.
 - c. What do you notice? What is the shortcut method for multiplying powers of 10?
 - d. Test your suspicion with the following situations:
 - $10,000,000 \times 10,000$
 - $1,000 \times 100,000,000$
 - $100,000,000,000 \times 10,000,000,000$.