



**Grade 5 Unit 6**

Lesson 2

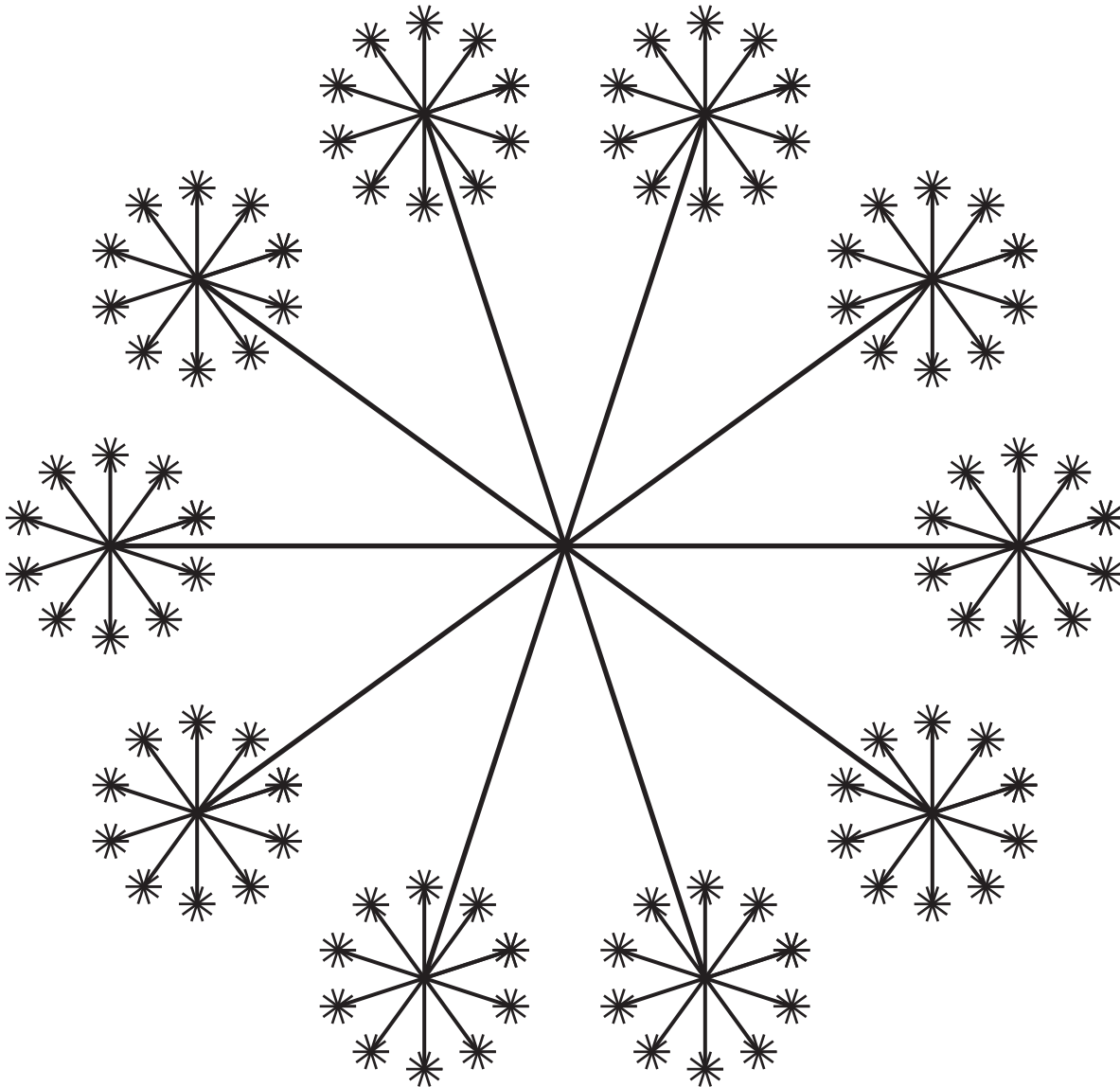
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**Unit 6 Lesson 2: Powers of 10**

**WU How Many Do You See: Starburst (Warm up)**

Student Task Statement

How many do you see? How do you see them?



## 1 Population of Delaware and India

### Student Task Statement

1. About 1,000,000 people live in Delaware.
  - a. How do you say this number?
  - b. How many thousands is this? Explain or show your reasoning.
  - c. Write the number using powers of 10.
  - d. How many times would you need to extend the diagram from the warm-up to get 1,000,000 tiny segments? Explain or show your reasoning.
2. In 1997, the population of India was about 1,000,000,000.

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- How would you say this number?
  - How many millions is this? How many thousands is it? Explain or show your reasoning.
  - Write the number using powers of 10.
  - How many times would you need to extend the diagram from the warm-up to get 1,000,000,000 tiny segments? Explain or show your reasoning.

## 2 Powers of 10

### Student Task Statement

- Find the missing number that makes each equation true. Show your reasoning.
  - $2,000 = \underline{\hspace{2cm}} \times 20$
  - $20 \times 10 \times \underline{\hspace{2cm}} = 20,000$
  - $\underline{\hspace{2cm}} \times 10 = 100,000$
  - $1,000 \times 10,000 = \underline{\hspace{2cm}}$
- How were products of 10s useful in solving these problems?
- Write each power of 10 as a number.
  - $10^3$
  - $10^4$
  - $10^7$

## 3 Beyond a Billion (Optional)

### Student Task Statement

- How would you say the number 1,000,000,000,000?
- How many billions is that? How many millions is it? Explain or show your reasoning.
- Write the number using powers of 10.
- Describe an example of something that there are 1,000,000,000,000 of in the world.