Unit 7, Lesson 10

Interpret Relationships

Let's find relationships between patterns.

Warm-up

True or False: Multiply and Divide

Decide if each statement is true or false. Be prepared to explain your reasoning.

- $276 \div 3 = \frac{1}{3} \times 276$

- $276 \div 3 = \frac{276}{6}$

- $(276 \div 3) \times 2 = \frac{2}{3} \times 276$

Activity 1

Mix and Match: 3 Patterns

1. Complete each table with the first 5 numbers of the pattern.
2. What are some relationships between the patterns for each set of rules and starting numbers? Be prepared to explain your thinking.

Set A

Pattern 1: Start with 0. Use the rule "Keep adding 3."

Pattern 2: Start with 0. Use the rule "Keep adding 6."

Set B

Pattern 1: Start with 4. Use the rule "Keep adding 3."

Pattern 2: Start with 9. Use the rule "Keep adding 6."

Set C

Pattern 1: Start with 0. Use the rule "Keep adding 5."

Pattern 2: Start with 0. Use the rule "Keep adding 3."

Activity 2

Generate Patterns

Partner A

1. Complete each table with the first 10 numbers of the pattern.

   Pattern 1: Start with 0. Use the rule "Keep adding 4."

   Pattern 2: Start with 0. Use the rule "Keep adding 6."

2. Compare the patterns. What relationships do you notice?

3. What number will be in Pattern 2 when the number in Pattern 1 is 40?

4. What number will be in Pattern 1 when the number in Pattern 2 is 120?

Partner B

1. Complete each table with the first 10 numbers of the pattern.

   Pattern 1: Start with 0. Use the rule "Keep adding 2."

   Pattern 2: Start with 0. Use the rule "Keep adding 3."

2. Compare the patterns. What relationships do you notice?

3. What number will be in Pattern 2 when the number in Pattern 1 is 30?

4. What number will be in Pattern 1 when the number in Pattern 2 is 60?