## 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.

* $276÷3=\frac{1}{3}×276$
* $276÷3=\frac{276}{6}$
* $\left(276÷3\right)×2=\frac{2}{3}×276$

### 10.1: Mix and Match: 3 Patterns

1. Complete the patterns for each set of rules.
2. What are some relationships between the patterns for each set of rules? Be prepared to explain your thinking.

Set A

Rule 1: Start at 0. Keep adding 3.



Rule 2: Start at 0. Keep adding 6.



Set B

Rule 1: Start at 4. Keep adding 3.



Rule 2: Start at 9. Keep adding 6.



Set C

Rule 1: Start at 0. Keep adding 5.



Rule 2: Start at 0. Keep adding 3.



### 10.2: Generate Patterns

Partner A

1. Generate patterns for the two rules.
* Rule 1: Start with 0. Keep adding 4.
* 
* Rule 2: Start with 0. Keep adding 6.
* 
1. Compare your patterns. What relationships do you notice?
2. What number will be in pattern 2 when the number in the pattern 1 box is 40?
3. What number will be in pattern 1 when the number in the pattern 2 box is 120?

Partner B

1. Generate patterns for the two rules.
* Rule 1: Start with 0. Keep adding 2.
* 
* Rule 2: Start with 0. Keep adding 3.
* 
1. Compare your patterns. What relationships do you notice?
2. What number will be in pattern 2 when the number in the pattern 1 box is 30?
3. What number will be in pattern 1 when the number in the pattern 2 box is 60?



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