

## Activity 3 Assessment

### Using Pattern Rules to Solve Problems

#### Extending Patterns to Solve Problems

Determines the pattern rule.

100, 97, 91, 86, 70, 55, 37, 16

“The pattern rule is: Start at 100 and subtract 3. Increase the number subtracted by 3 each time.”

Uses pattern rule to determine missing values.

How would you determine the missing value for week 5?

Week	Practice Time (min)
1	25
2	$35 = 25 + 10$
3	$50 = 35 + 15$
4	$70 = 50 + 20$
5	
6	$125 = 95 + 30$

“The pattern rule is: Start at 25 and add 10. Then increase the amount added by 5 each time. Week 5 is  $70 + 25 = 95$ .”

Extends patterns using mathematical expressions.

3, 8, 13, 18, 23, 28

“I can use the expression  $5n - 2$  to extend the pattern, where  $n$  represents the term number. The seventh term would be  $5 \times 7 - 2 = 33$ .”

Flexibly describes and solves problems using mathematical expressions and properties.

Input	Output
10	19
9	17
8	15
7	13
6	11
5	
4	

“To determine the output number, multiply the input number by 2 and subtract 1. I would use the expression  $2n - 1$ , where  $n$  is the term number, to find the missing values:  
 $2 \times 5 - 1 = 9$ ,  $2 \times 4 - 1 = 7$ .”

#### Observations/Documentation