

## UNIT 4      MULTIPLE REPRESENTATIONS

### GUIDING QUESTIONS:

What is the connection?

Is there a pattern?

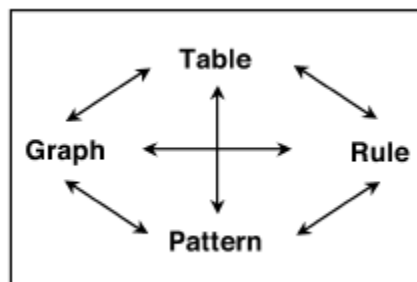
How many different ways can it be represented?

How does a pattern grow?

How does a pattern show up in the equation (rule), table, and graph?

### UNIT 4 OBJECTIVES: Colorado Math Standards 2-1, 2-2, 2-5

Students find connections between the four representations: graphs, tables, tile patterns, and rules.



Students write equations (rules) from word problems

Students solve systems of linear equations in the form of  $y=mx+b$

## UNIT 4: VOCABULARY

<u>b</u>	<u>CONTINUOUS</u>	<u>COORDINATES</u>
<u>DEPENDENT VARIABLE</u>	<u>DISCRETE</u>	<u>EQUAL VALUE METHOD</u>
<u>EQUATION</u>	<u>FIGURE 0</u>	<u>GRAPH</u>
<u>GROWTH</u>	<u>INDEPENDENT VARIABLE</u>	<u>m</u>
<u>PATTERN</u>	<u>POINT OF INTERSECTION</u>	<u>REPRESENTATION</u>
<u>RULE</u>	<u>SOLUTION</u>	<u>STARTING VALUE</u>
<u>SYSTEM OF EQUATIONS</u>	<u>WEB</u>	<u>x → y table</u>
<u>x- and y- intercepts</u>	<u>y=mx+b</u>	

## **ASSIGNMENTS: UNIT 4 MULTIPLE REPRESENTATIONS**

<b>DAY</b>	<b>DATE</b>	<b>TEAMWORK</b>	<b>HOMEWORK</b>	<b>POINTS</b>
<b>1</b>	<b>8/19</b>	-Form student teams -Team roles	That quiz – computer lab	
<b>2</b>	<b>8/21</b>	-Student teams and team roles continued -Algebra tiles	That quiz – computer lab	
<b>3</b>	<b>8/25</b>	4.1	4.2 – computer lab	
<b>4</b>	<b>8/27</b>	Gallery Walk 4.8-12	4.13-17	
<b>5</b>	<b>8/31</b>	4.18-20	4. 21-25	
<b>6</b>	<b>9/2</b>	4.26-31	4.32-36	
<b>7</b>	<b>9/4</b>	4.37-38	4.39-48	
<b>8</b>	<b>9/9</b>	4.49-53	4.54-58	
<b>9</b>	<b>9/11</b>	4.59-61	4.62-66	
<b>10</b>	<b>9/15</b>	4.67-70 Team quiz	4.71-75	
<b>11</b>	<b>9/17</b>	4.76-79	4.80-84	
<b>12</b>	<b>9/21</b>	4.85-89	4.90-94	
<b>13</b>	<b>9/23</b>	4.95	4.96-106	
<b>14</b>	<b>9/25</b>	Chapter 4 Team Test	CL 4.108-117	
<b>15</b>	<b>9/29</b>	Chapter 4 closure activity Individual Chapter 4 test		

Assistance with most homework problems is available at  
[www.hotmath.com](http://www.hotmath.com) Click on **ALGEBRA CONNECTIONS BOOK**

**REFLECTION:** How can something be represented in different ways?

**ALSO:**

- How do you investigate patterns...
- How do you examine patterns, tables, rules, and graphs...
- Reason and justify how patterns are formed...explain their relationships algebraically and graphically...
- Visualize...different rules in the  $y=mx+b$  form and explain their changes on a coordinate grid using  $(x,y)$
- Choose strategies and tools to solve a system of linear equations where both are in  $y=mx+b$  form. What does the point of intersection mean?