

Example:

Analyze a pattern:

Describe the pattern in the table below:

x	y
1	0.5
2	2
3	3.5
4	5

Write a linear equation that models the relationship between the values in the table:

Example:

Analyze the pattern below to determine the equation that models the pattern.

Use the equation you find to determine the nineteenth value in the pattern.

4, 7.5, 11, 14.5, 18, ...

Example:

Sam's cell phone plan is \$45 per month, plus \$0.15 for every text message sent.

Create a table of values comparing the number of text messages and the monthly cost of the cell phone plan.

Using " n " for the number of text messages and " C " for the total monthly cost of the cell phone plan, the equation for Sam's cell phone plan is:

What would Sam's bill be if they sent 215 text messages in a month?

If Sam budgets \$100 a month for their cell phone, what is the maximum number of text messages can they send each month?

Example:

Edmund Halley, after whom Halley's comet was named, predicted that the comet would appear in 1758. The comet appears approximately every 76 years.

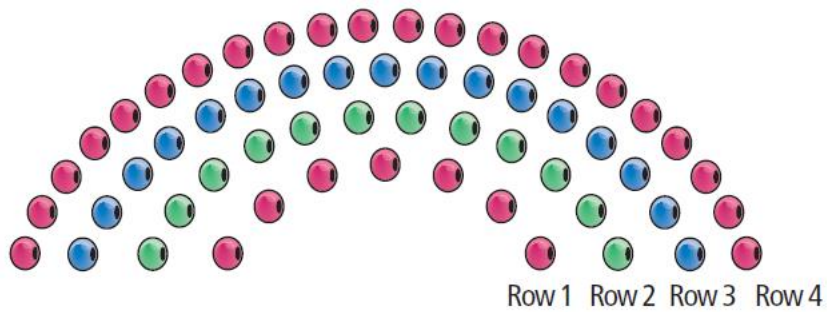


- a) Use a table to show the years of the next six sightings after 1758.

Sighting #	Year of Sighting
1	
2	
3	
4	
5	
6	

- b) When will Halley's comet appear in your lifetime?
- c) Write an equation that can be used to predict the years when Halley's comet will appear.
- d) Will Halley's comet appear in the year 2370? How did you arrive at your answer?

Example:



- A bead design for a necklace has an arc shape:
- **Row 1** has **seven red beads**
- **Row 2** has **five additional** beads and all the **beads are green**
- **Row 3** has **five additional** beads and all the **beads are blue**.

The pattern repeats: **five beads are added to each successive row**.

Create a table of values to show the relationship between the row number and the number of beads in the row.

Analyze the table of values to determine the equation for this relation.

Use your equation to determine the number of beads in row 6.

Use your equation to determine which row contains 92 beads.

Check your understanding questions:

pg. 216 – 219, #7, 9, 10, 12, 17* (use fractions, not decimals)