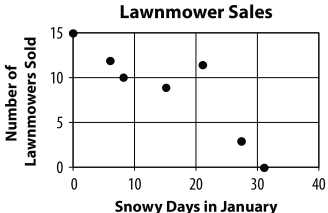# Sample Lesson #2

1.   Find the slope by calculating $\dfrac{\text{rise}}{\text{run}}$ between the two points.

2.   Dilate the figure by a scale factor of $\frac{1}{2}$. Draw the new figure and label the coordinates.

3. $(3.7 \times 10^9) - (2.4 \times 10^7) = ?$ Write the difference in scientific notation.

4.   Find the volume of the given cylinder. Use 3.14 as the value of pi.

5.   Solve for r. How many solutions are there? $7r + 2(r + 6) = 39$

6.   Study the graph. There is a negative association between the number of snowy days during the month and the amount of lawn mowers sold. What does this mean?

7.   The diameter of one of Kelly's hairs is 0.00014 m. Write this number using scientific notation.

8.   Consider the equations $-3x - 3y = -15$ and $x = -3y + 1$. Solve the system of equations using substitution. Give your solution to the system as a pair of coordinates.

9.   If $m\angle B = 101°$, find the measures of $\angle E$, $\angle F$, $\angle G$, and $\angle H$.

10. The vertical line test shows this graph does <u>not</u> represent a function. Explain why.

11. Approximate the value of $\sqrt{31}$ to the nearest tenth.

12. Graph the data points shown in the table and give the slope. (Hint: Use the formula for calculating slope.)

x	y
0	2
8	4
12	5
16	6

1. 8.EE.6

2. 8.G.3

3. 8.EE.4

4. 8.G.9

4 cm

3 cm

5. 8.EE.7

6. 8.SP.1

A) Lawnmowers cannot be used to remove snow.

B) People use more lawnmowers in the winter.

C) As the amount of snow days increases, the need for lawnmowers decreases.

7. 8.EE.3

8. 8.EE.8

9. 8.G.5

r   A B
    E F

s   G H
    C D

r ∥ s

10. 8.F.1

11. 8.NS.2

12. 8.EE.5