1. Computer Games

Mo'Nique discovered that four computer games cost $92. She built the following table to help her think through a problem, but didn't know what to do next.

Games	Cost
4	92
8	184
12	276
16	368

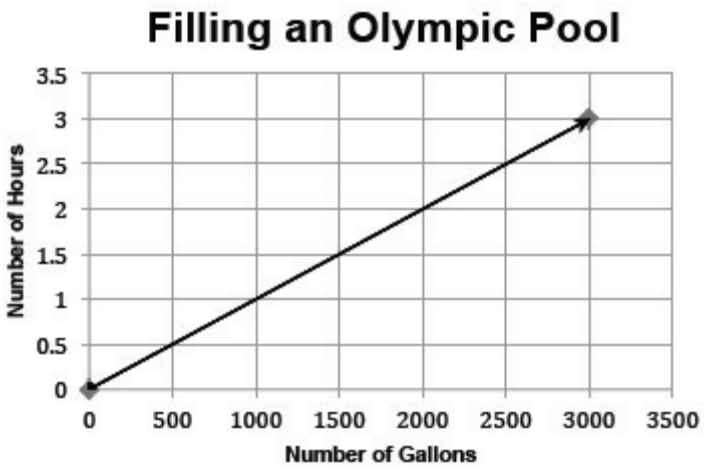
a. Create a scatterplot to graph the data in the table above.

b. Find the slope of the line that passes through the scatterplot, and explain in words what the slope means in the context of the problem.

c. Explain in words how you can use the slope to solve Mo'Nique's problem: How many computer games will cost $575?

2. Olympic Pool

In the graph below, an Olympic-sized swimming pool is being filled with an average-sized garden hose.



a. At what hourly rate is the pool in the graph above being filled? Use mathematical reasoning to justify your response.

b. Is the hourly rate at which the pool is filling the same as the slope of the line? Why or why not? Explain your reasoning in words.

c. Determine the equation of the line in the graph above. Show how you determined your answer.

d. How long will it take to fill the 660,000-gallon pool? Use mathematical reasoning to justify your response.

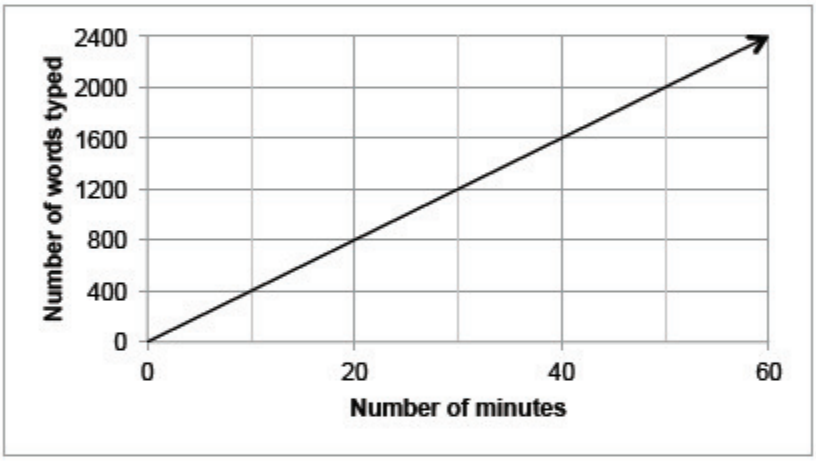
4. Professional Typist

A professional typist can typically type 50 words per minute.

a. Graph the relationship described above.

b. Write an equation relating the number of words typed (w) in terms of the time (t) in minutes. What information do the numbers in the equation represent? Explain your reasoning in words.

c. The graph below shows the number of words typed by Donald over a 60-minute period of time. Write an equation relating the number of words typed in terms of the time in minutes. Use mathematical reasoning to justify your response.



d. Determine if the following statements are true or false. Provide evidence based on the context of the problem that shows why the statements are true or false. Explain your reasoning in words.

i) A person can decide if Donald types faster or slower than the professional typist by comparing Donald's graph to the professional's graph.

ii) A person can decide if Donald types faster or slower than the professional typist by comparing Donald's equation to the professional's equation.