

4. A large outdoor pool is drained to prepare for the winter season. Let t represent the number of hours since the pool starts to drain and let $g(t)$ represent the number of gallons remaining in the pool after t hours. The relationship can be described symbolically:

$$g(t) = 40,000 - 600t$$

- a. Calculate $g(20)$ and interpret the value you calculated in context of this problem.

$$g(20) = 40,000 - 600(20)$$

$$g(20) = 40,000 - 12,000$$

$$g(20) = 28,000$$

- b. Find the slope of the function and interpret what it means in context of this problem.

$$\text{The slope} = -600$$

(it means the number of hours since the pool started to drain $\times t$)

- c. Find the y-intercept of the function and interpret what it means in context of this problem.

$$y = 40,000$$

(it means the number of gallons remaining in the pool.)

when specifically?

- d. If there are 9,850 gallons remaining in the pool, how many hours has it been since the pool started draining?

$$g(t) = 9,850 - 600t$$