Myla's swimming pool contains 16,000 gallons of water when it is full. On Thursday, her pool was only partially full. On Friday, Myla decided to refill her pool completely using a hose that flowed at a rate of 10 gallons per minute. It took her 5 hours to completely fill her pool.

Part A

Type a number into each box to complete the sentences.

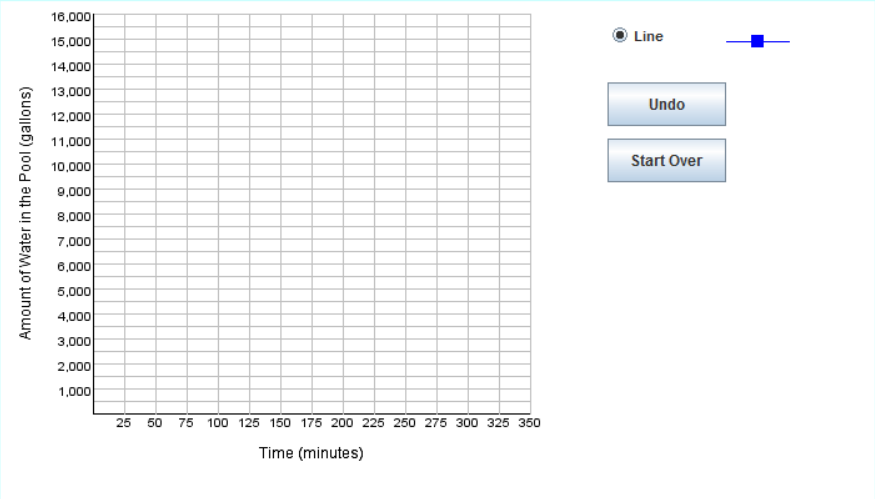
Before Myla started filling the pool, there were [ ] gallons of water in the pool.

The rate at which water is being added to the pool is [ ] gallons per **hour**.

Part B

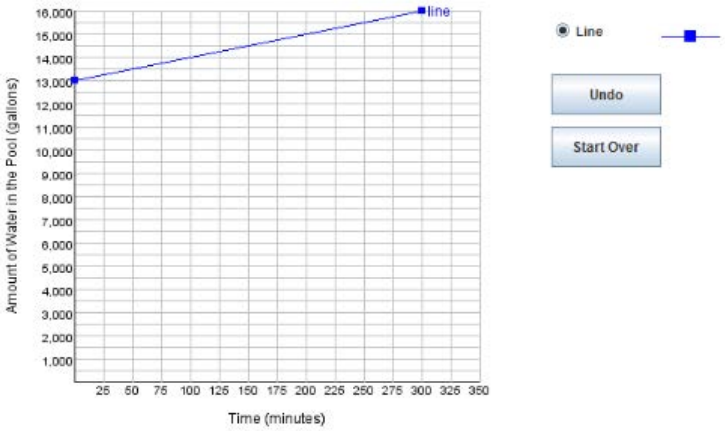
On the coordinate plane provided, graph a function that represents the number of gallons of water in Myla's pool given the amount of time, in minutes, she spent filling her pool on Friday.

Select two points on the coordinate plane and the line containing the two points will be automatically drawn. You can undo your last step by clicking "Undo". You can reset the tool by clicking "Start Over".



Algebra I	Myla's Swimming Pool
Item Type	Type I – 2 points
Evidence Statement	**HS-Int.3-2:** Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge and skills articulated in F-LE, A-CED.1, A-SSE.3, F-IF.B, F-IF.7, limited to linear and quadratic functions. Clarifications for H-Int.3-2:

	i) F-LE is the primary content and at least one of the other listed content elements will be involved in tasks as well. For rational solutions, exact values are required. For irrational solutions, exact or decimal approximations may be required. Simplifying or rewriting radicals is not required.
Most Relevant Standards for Mathematical Content	**F-LE.2:** Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). This standard is supporting content in the course based on the PARCC Model Content Frameworks.
Most Relevant Standards for Mathematical Practice	Students must think about the context and use the regularity in the linear rate to create a good mental model of the situation (MP.8).
Item Description and Assessment Qualities	This task illustrates how linear functions in Algebra I build on previous understandings of equations, functions and proportional reasoning so that they can be used as an important tool for solving multi-step contextual word problems that are expected at high school. Students first graph the relationship, then use the graph to fill-in the important values that complete the statements about the relationship. Unlike traditional multiple choice, it is difficult to guess the correct answer or use a choice elimination strategy.
Scoring Information	Task is worth 2 points. Task can be scored as 0, 1, or 2. Part A – 1 point Student types “13,000” or “13000” in the first blank and “600” in the second blank. Part B – 1 point Student graphs $f(m) = 13{,}000 + 10m$


line
16,000
15,000
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
Amount of Water in the Pool (gallons)
25 50 75 100 125 150 175 200 225 250 275 300 325 350
Time (minutes)
Line
Undo
Start Over