**Lesson 1.1.1**

* **1-2.** Not a good suggestion. Any input *x* ≤ −20 will *not* give the negative output the customer requested.
* **1-3. See below:**
	1. The output from the first machine is −2; the output from the second machine is 4.
	2. Not possible.  The output of the second machine is always positive regardless of the input.
* **1-4. See below:**
	1. (*x* − 2)2could not be last, because the output is negative, and squaring a number makes it positive.  *******could* be last, but is *probably* not last because the output is not a fraction.
	2. Since the input is 0, ****** could not be first because it would require dividing by 0**.**
	3. The correct order is (*x* − 2)2, ******, 4*x* − 32.
	4. The correct order is ******, 4*x* − 32, (*x* − 2)2.
* **1-5. See below:**
	1. The correct order is −2*x* + 34, (*x* − 2)2, **,  − 10.
	2. The correct order is **,  − 10, (*x* − 2)2, −2*x* + 34.
* 
* **1-6. See below:**
	1. *y* = *x*2 − 6 and then *y* = .
	2. Yes, reverse the order of the machines (*y* =  and then *y* = *x*2 − 6) and use an input of *x* = 6.
* **1-7. See below:**
	1. 54
	2. −7******
	3. 2
	4. 2.93
* **1-8. See below:**
	1. 
	2. It grows by adding two tiles each time.
	3. 1;  The top and right tiles are removed, since the pattern is to add two tiles to expand each figure.
* **1-9. See below:**
	1. −59
	2. 17
	3. −72
	4. 6
	5. −24
	6. −25
	7. 25
	8. −25
	9. 7
* **1-10. See below:**
	1. *y* = 1
	2. *y* = 3
	3. *y* = 9