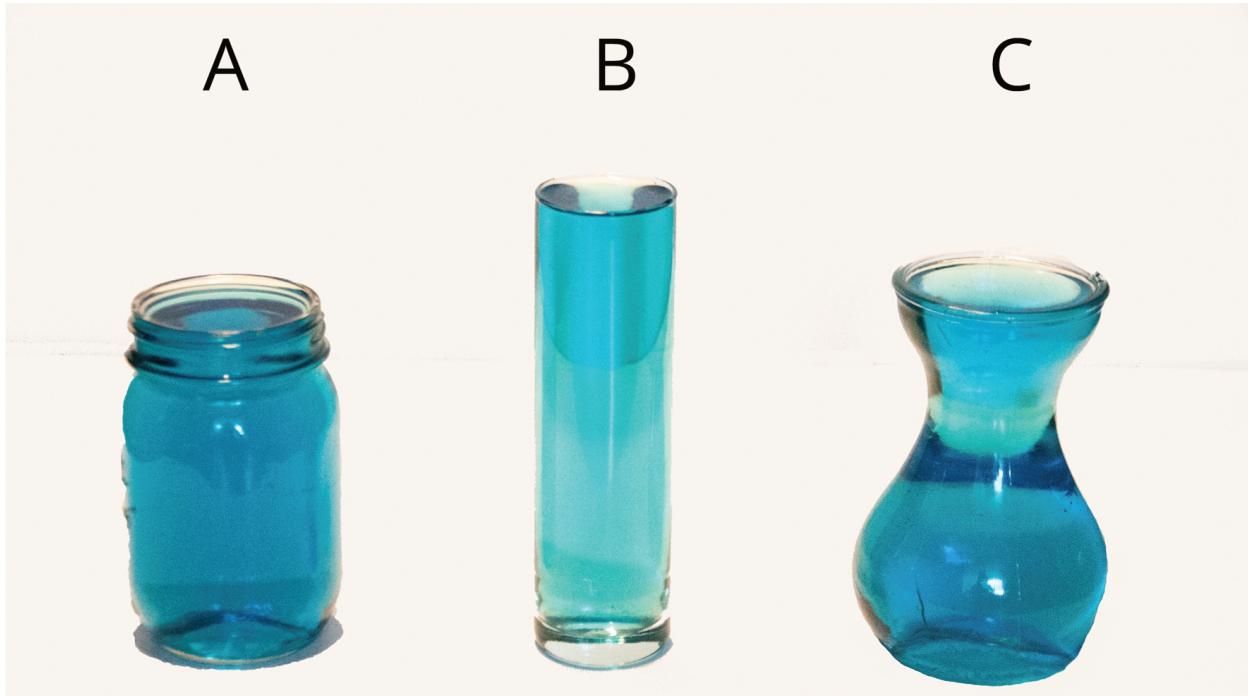


## Unit 5 Lesson 6: Representations of Linear Relationships

### 1 Estimation: Which Holds More? (Warm up)

#### Student Task Statement

Which glass will hold the most water? The least?

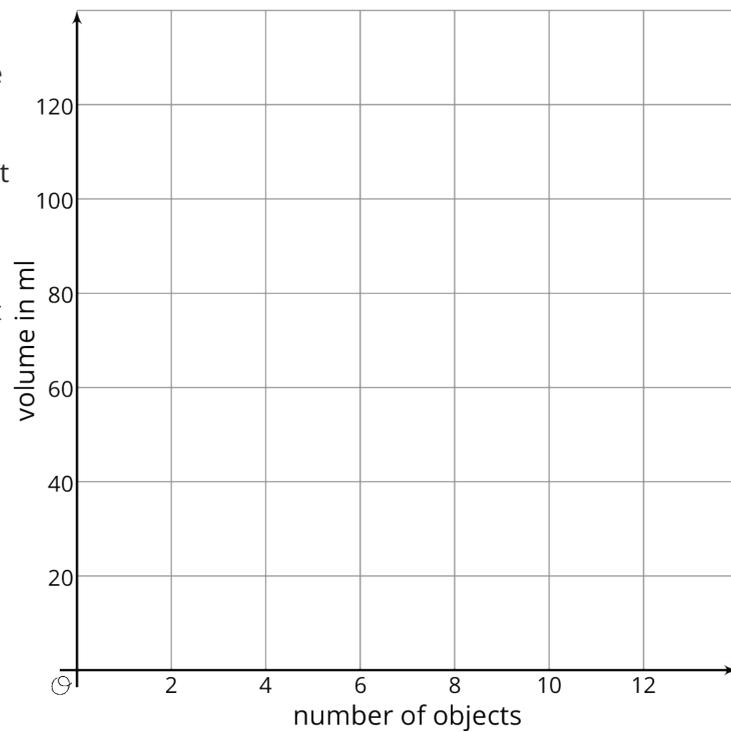


## 2 Rising Water Levels

### Student Task Statement

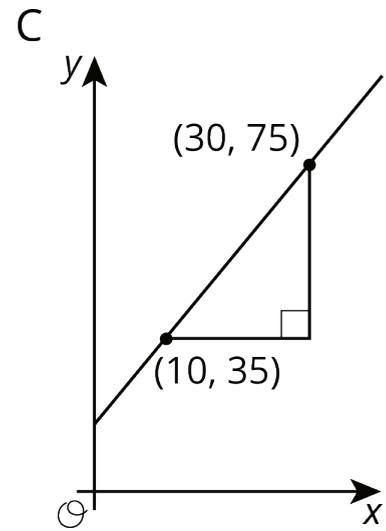
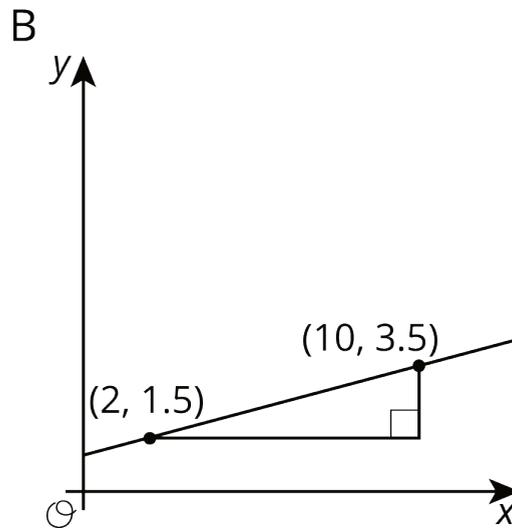
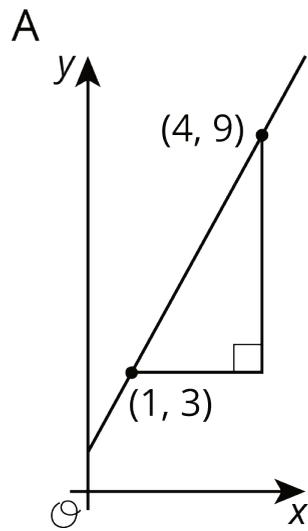
1. Record data from your teacher's demonstration in the table. (You may not need all the rows.)
2. What is the volume,  $V$ , in the cylinder after you add  $x$  objects? Explain your reasoning.
3. If you wanted to make the water reach the highest mark on the cylinder, how many objects would you need?
4. Plot and label points that show your measurements from the experiment.
5. The points should fall on a line. Use a ruler to graph this line.
6. Compute the slope of the line. What does the slope mean in this situation?
7. What is the vertical intercept? What does vertical intercept mean in this situation?

| number of objects | volume in ml |
|-------------------|--------------|
|                   |              |
|                   |              |
|                   |              |
|                   |              |
|                   |              |



### 3 Calculate the Slope

#### Student Task Statement

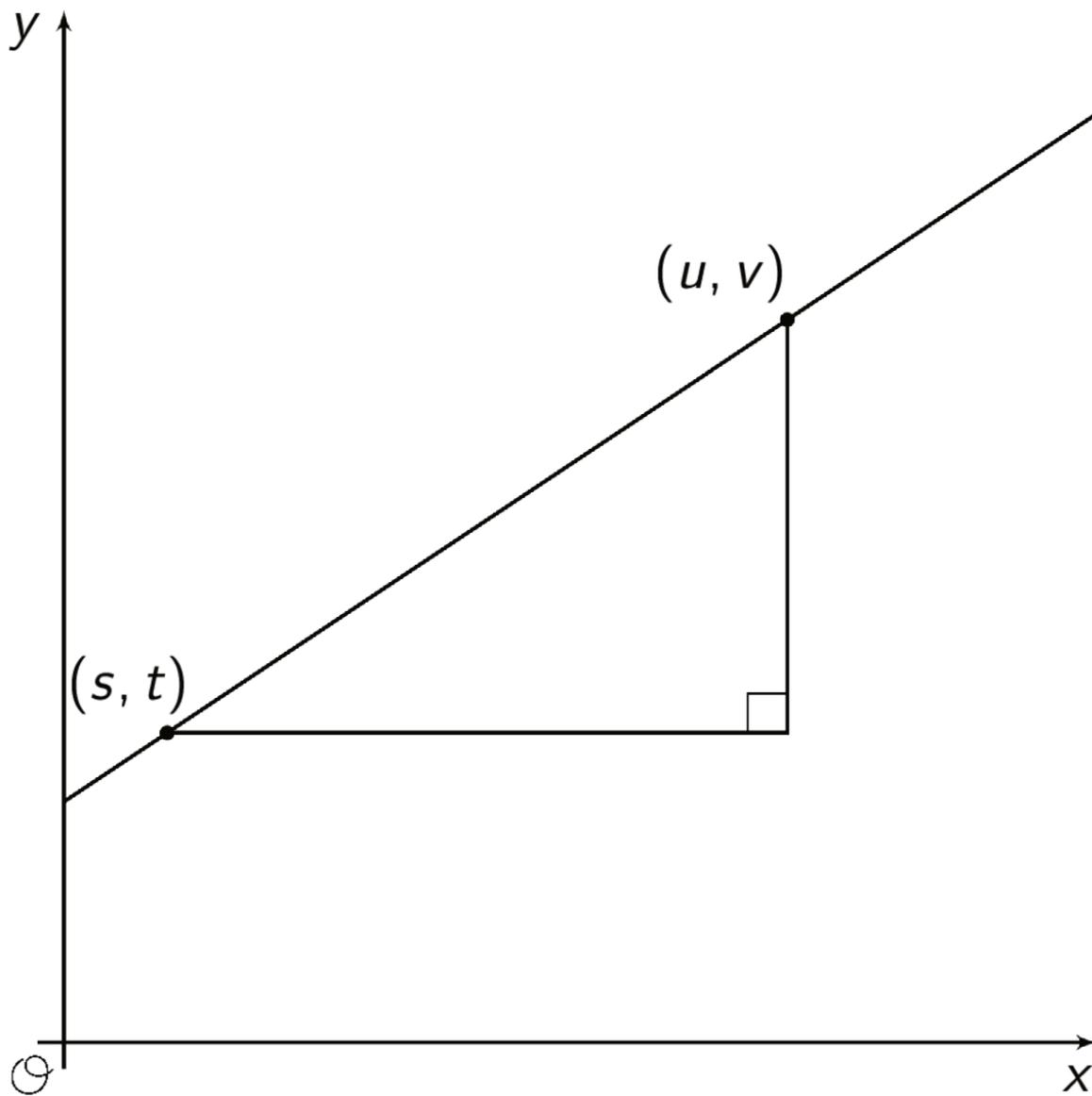


1. For each graph, record:

| vertical change | horizontal change | slope |
|-----------------|-------------------|-------|
|                 |                   |       |
|                 |                   |       |
|                 |                   |       |

2. Describe a procedure for finding the slope between any two points on a line.

3. Write an expression for the slope of the line in the graph using the letters  $u$ ,  $v$ ,  $s$ , and  $t$ .



Images for Activity Synthesis

