MM Algebra
Ms. Peng/Mr. Villegas

Name: _____
Date: _____

Aim/Essential Question: How do we graph exponential relationships?

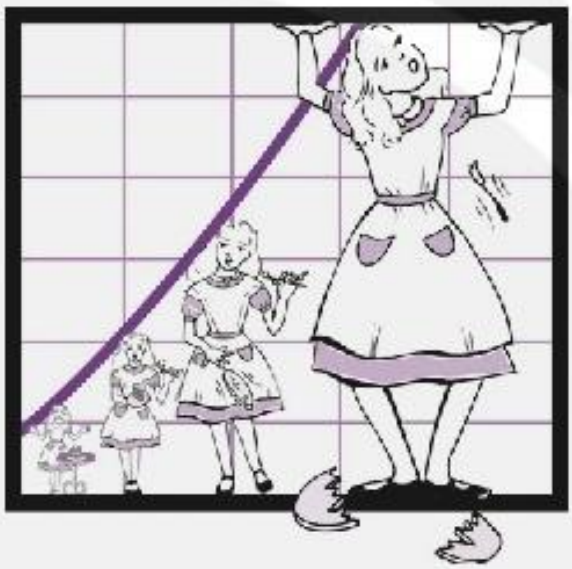
Do now: As you read the task below, underline any word you think might be important. Write a question mark next to any concept you don't understand and circle any word you don't understand. Draw a box around the question or task you are being asked to complete, if any, and number the prompts.

Graphing Alice

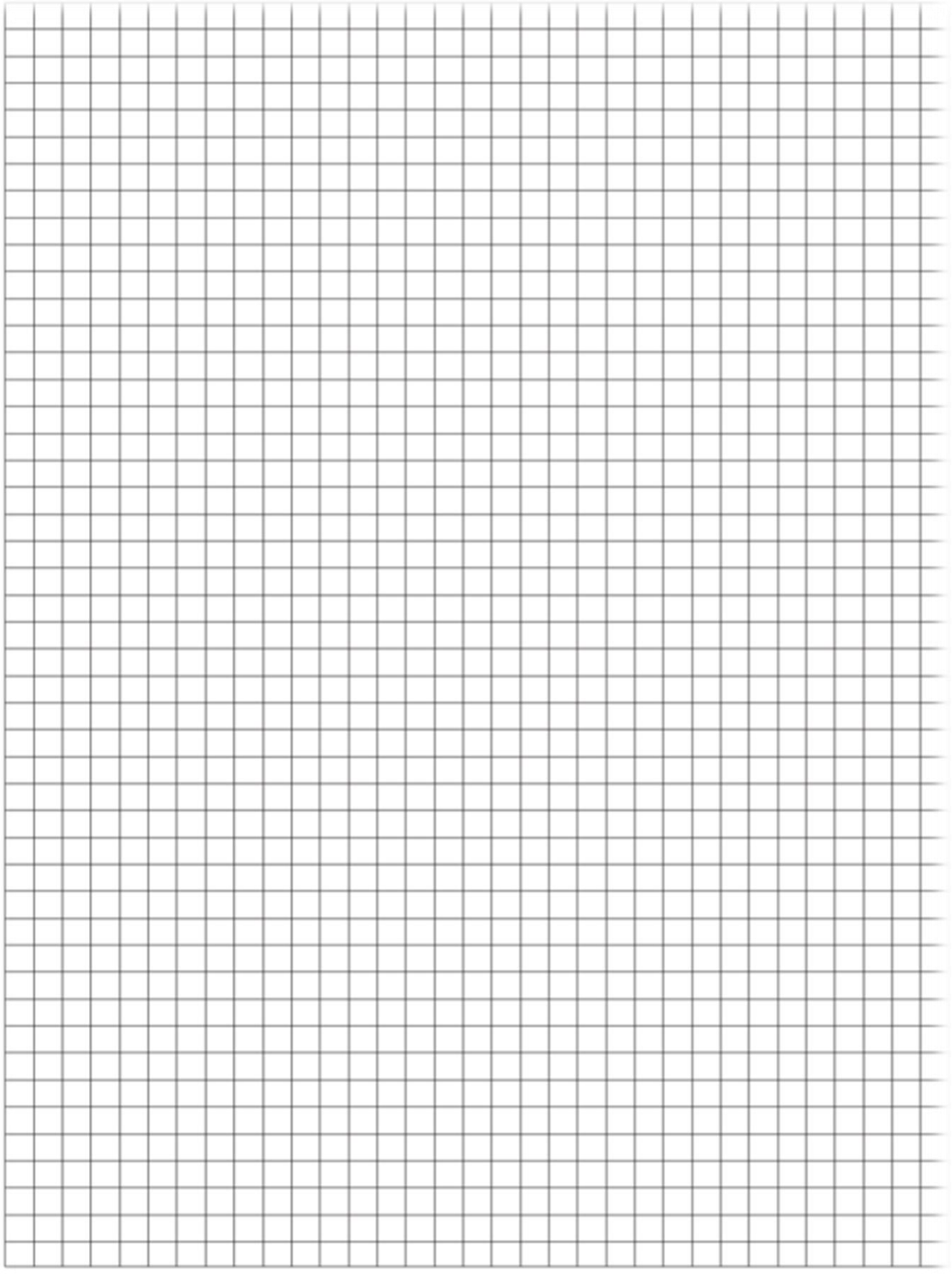
In the activity *Alice in Wonderland*, you examined what happened to Alice's height in various situations. Now you will look at that information in an organized way.

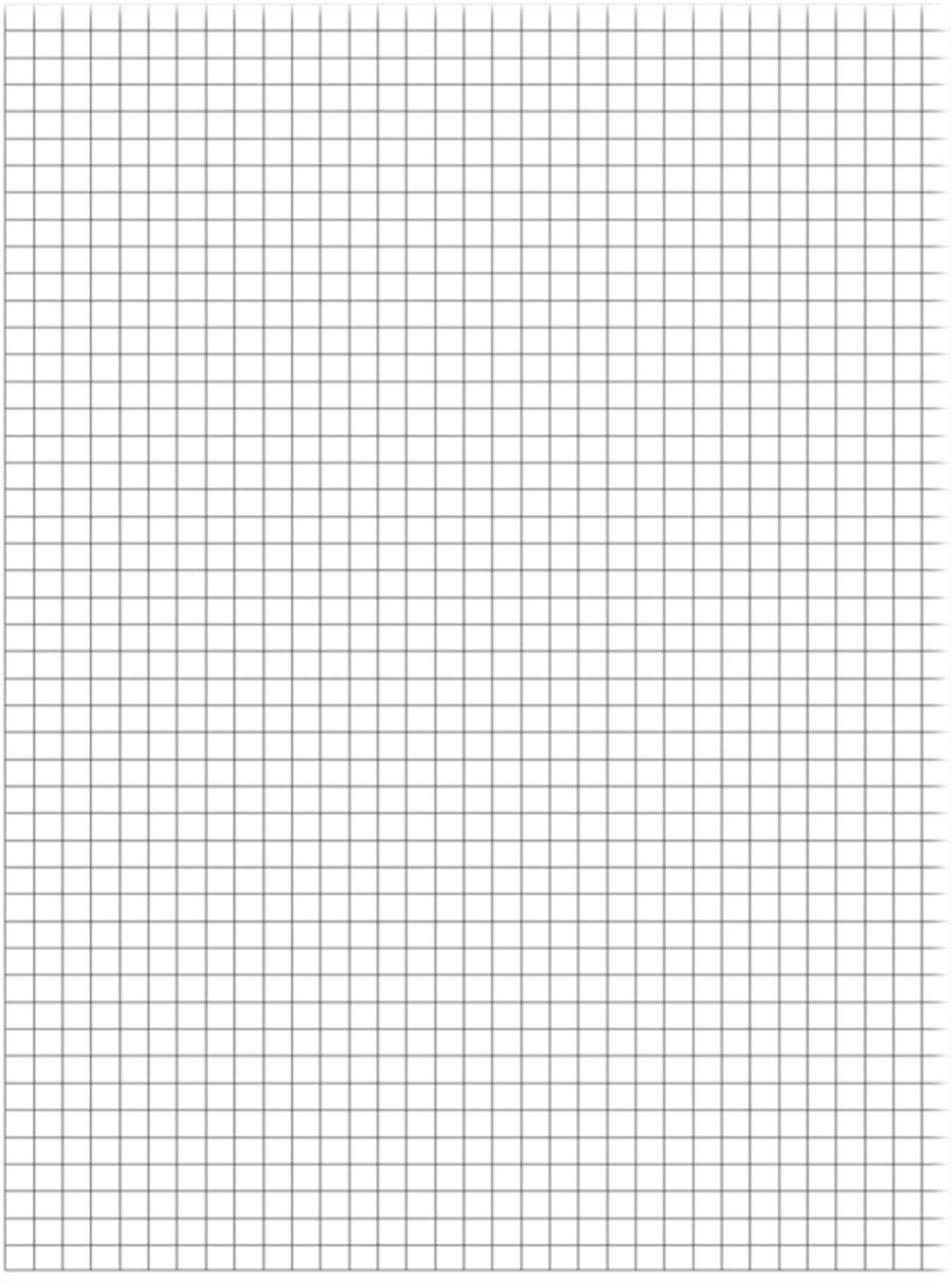
Choose a suitable scale for each graph you create. The scales of the two axes do not need to be the same.

1. Alice's height changes when she eats the cake. Assume her height doubles for each ounce of cake she eats.
   a. Find out what Alice's height is multiplied by when she eats 1, 2, 3, 4, 5, or 6 ounces of cake.
   b. Make a graph of this information.
2. Alice's height also changes when she drinks the beverage. Assume her height is halved for each ounce she drinks.
   a. Find out what Alice's height is multiplied by when she drinks 1, 2, 3, 4, 5, or 6 ounces of beverage.
   b. Make a graph of this information.



1a	2a





3. Suppose Alice discovers a new kind of cake. This cake triples her height for every ounce she consumes. Answer Question 1 for this new cake.

4. Suppose Alice finds a different kind of beverage. This beverage reduces her height to one-third of its measure for every ounce she consumes. Answer Question 2 for this new beverage.

5. Compare and contrast your graphs for Questions 1 to 4. In general, what do you think is true of these types of graphs?

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4.
5.