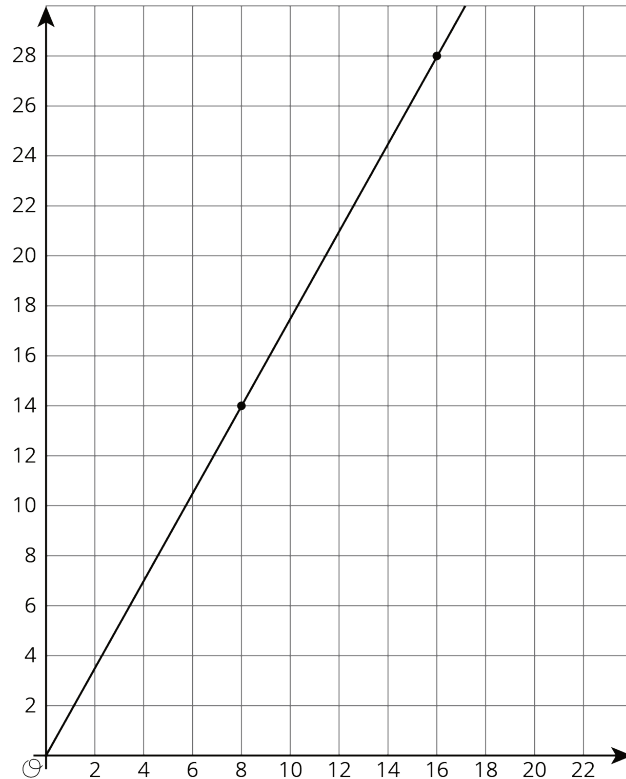


Unit 3 Lesson 2: Graphs of Proportional Relationships

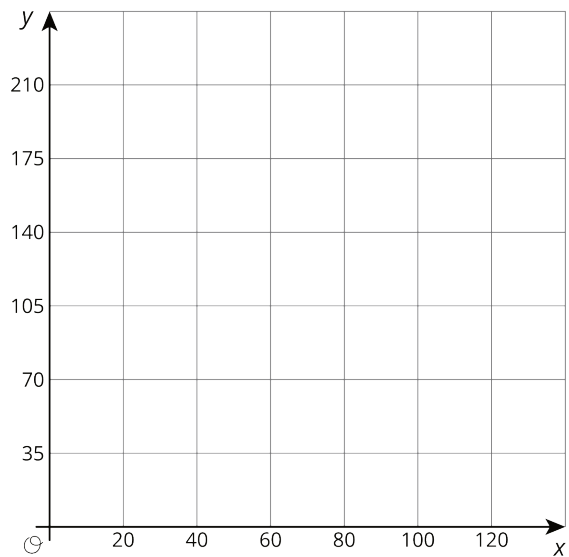
1 An Unknown Situation (Warm up)

Student Task Statement

Here is a graph that could represent a variety of different situations.



1. Write an equation for the graph.
2. Sketch a new graph of this relationship.



2 Card Sort: Proportional Relationships

Student Task Statement

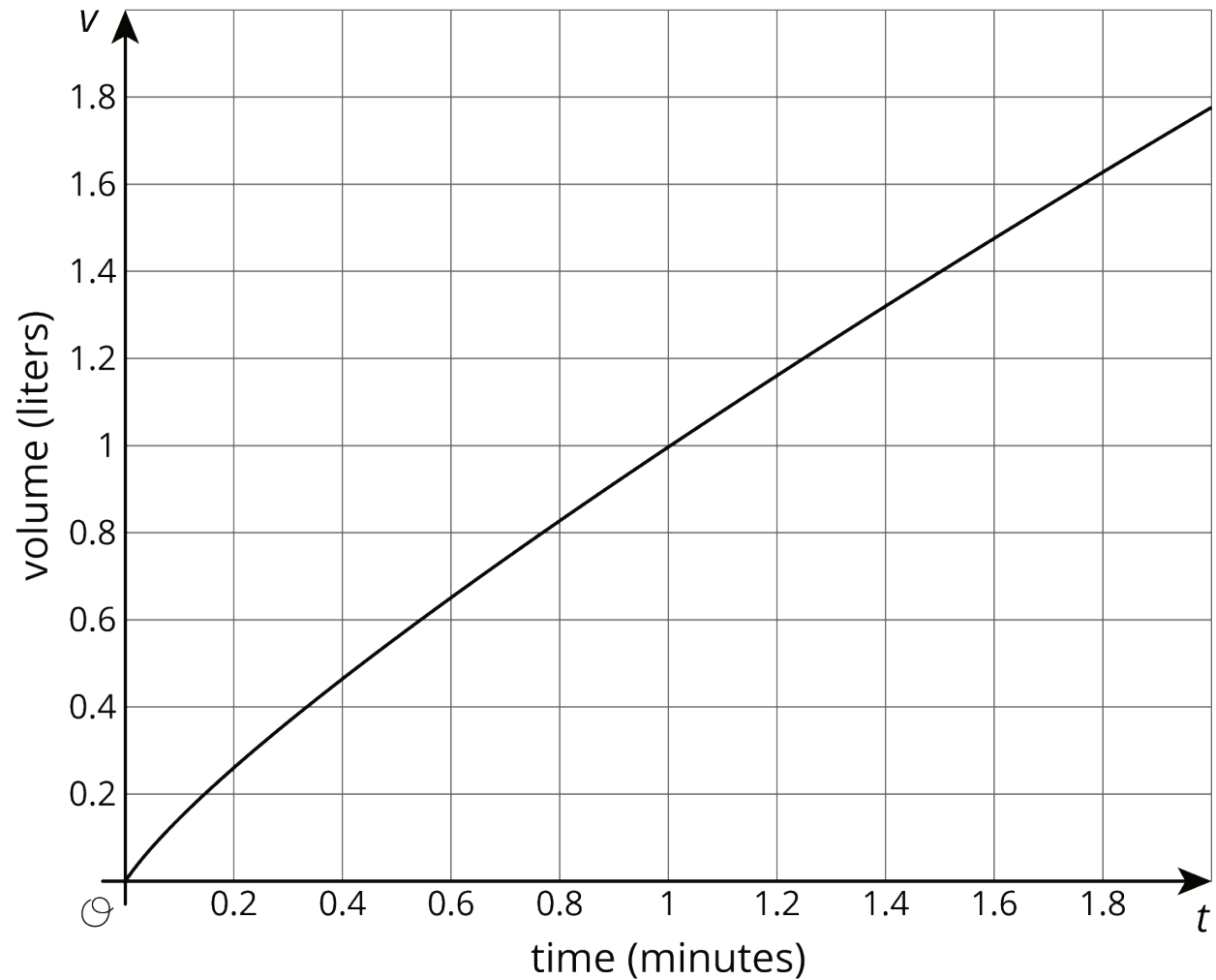
Your teacher will give you 12 graphs of proportional relationships.

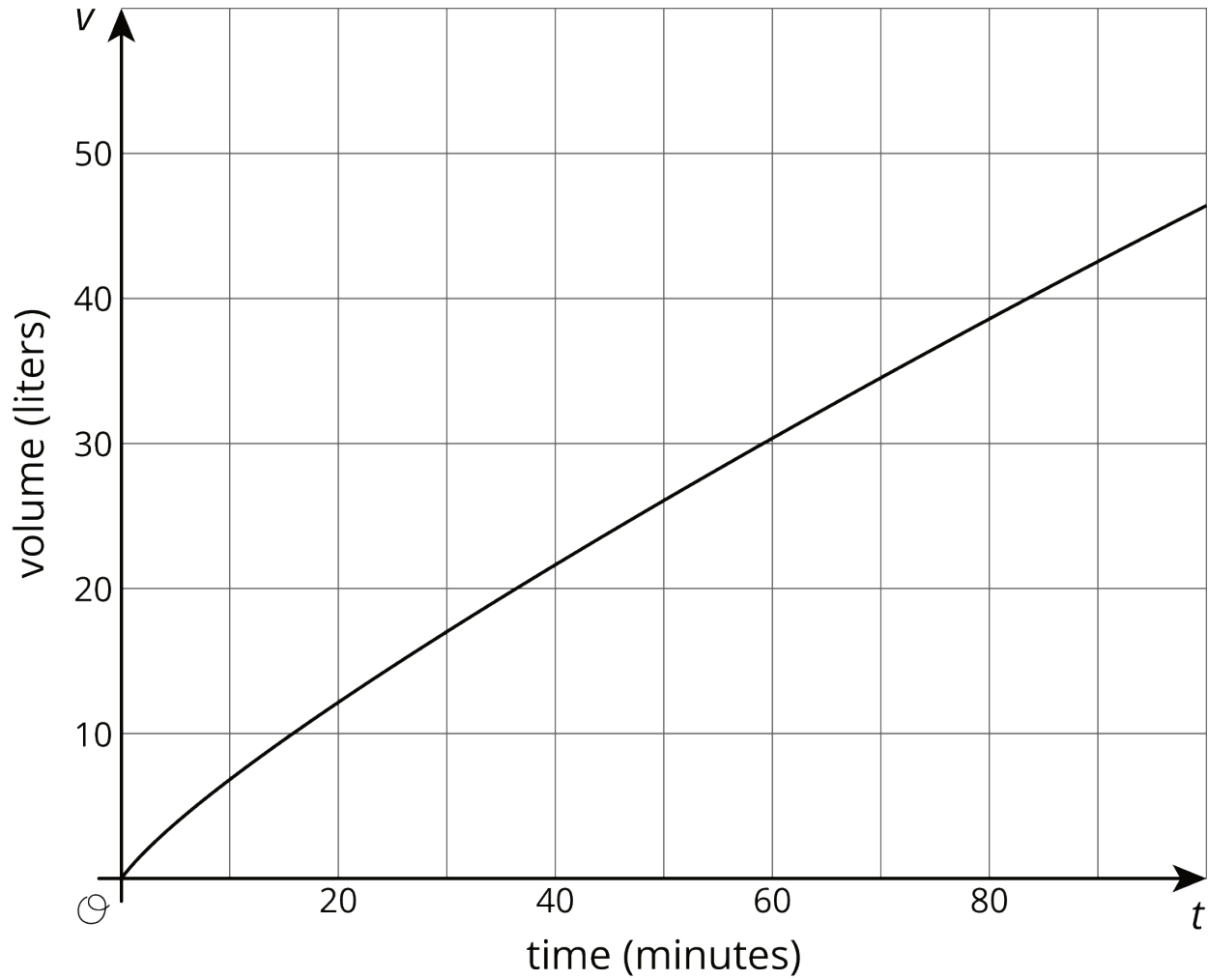
1. Sort the graphs into groups based on what proportional relationship they represent.
2. Write an equation for each *different* proportional relationship you find.

3 Different Scales

Student Task Statement

Two large water tanks are filling with water. Tank A is not filled at a constant rate, and the relationship between its volume of water and time is graphed on each set of axes. Tank B is filled at a constant rate of $\frac{1}{2}$ liters per minute. The relationship between its volume of water and time can be described by the equation $v = \frac{1}{2}t$, where t is the time in minutes and v is the total volume in liters of water in the tank.





1. Sketch and label a graph of the relationship between the volume of water v and time t for Tank B on each of the axes.
2. Answer the following questions and say which graph you used to find your answer.
 - a. After 30 seconds, which tank has the most water?
 - b. At approximately what times do both tanks have the same amount of water?
 - c. At approximately what times do both tanks contain 1 liter of water? 20 liters?

Images for Activity Synthesis

