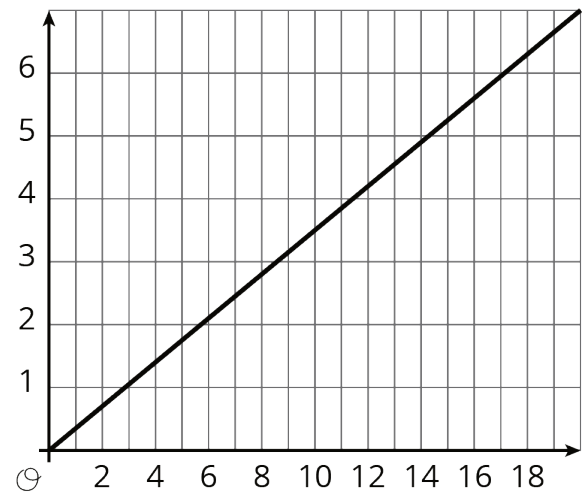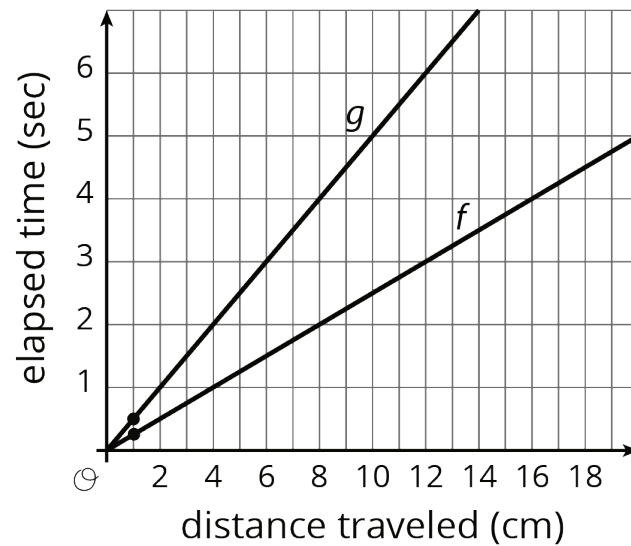# Unit 5 Lesson 1: Understanding Proportional Relationships

1 Notice and Wonder: Two Graphs (Warm up)

Student Task Statement
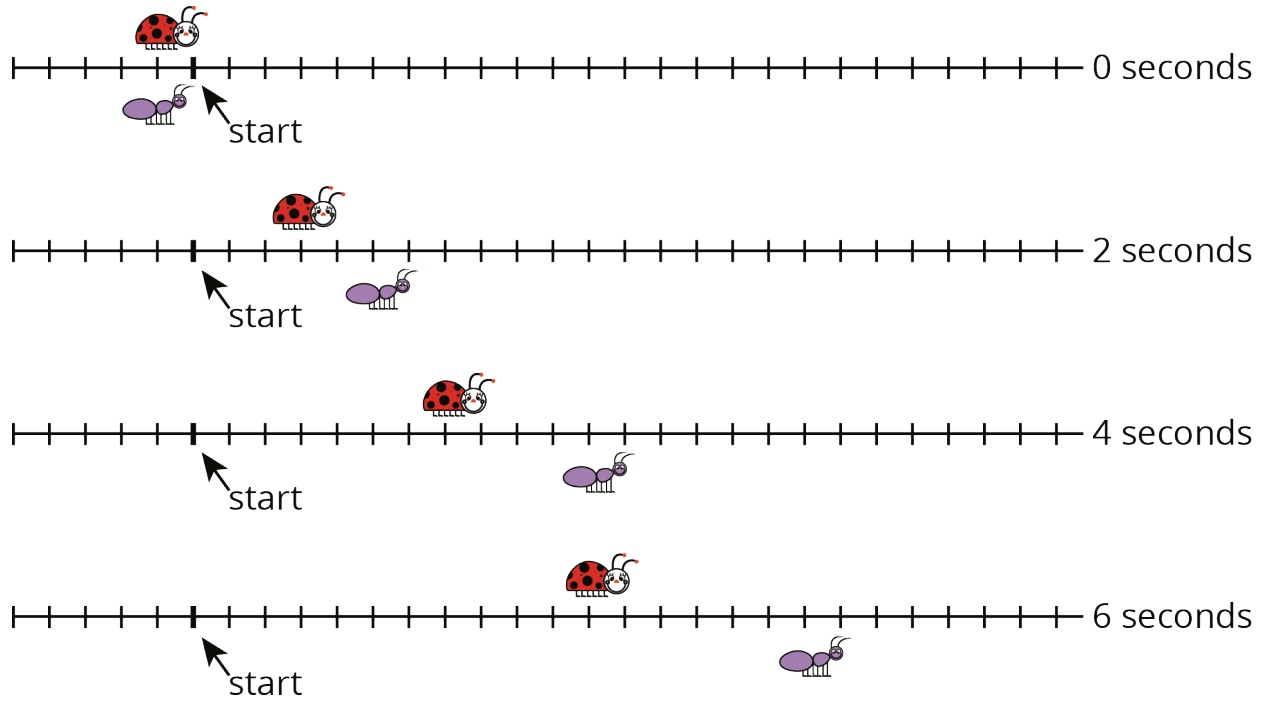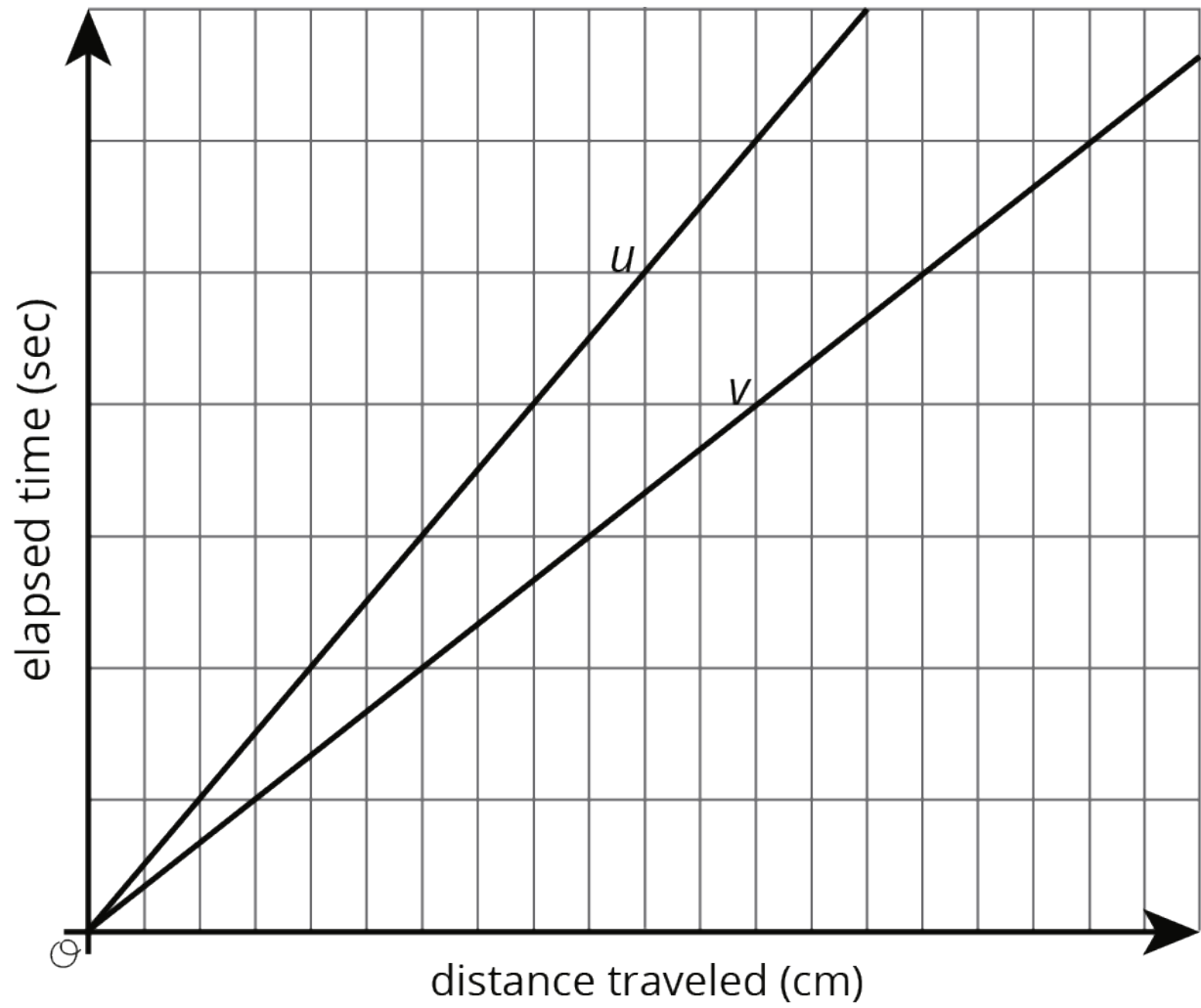

What do you notice? What do you wonder?

2 Moving Through Representations

Student Task Statement

A ladybug and ant move at constant speeds. The diagrams with tick marks show their positions at different times. Each tick mark represents 1 centimeter.

1. Lines u and v also show the positions of the two bugs. Which line shows the ladybug's movement? Which line shows the ant's movement? Explain your reasoning.

2. How long does it take the ladybug to travel 12 cm? The ant?

3. Scale the vertical and horizontal axes by labeling each grid line with a number. You will need to use the time and distance information shown in the tick-mark diagrams.

4. Mark and label the point on line u and the point on line v that represent the time and position of each bug after traveling 1 cm.

3 Moving Twice as Fast

Student Task Statement

Refer to the tick-mark diagrams and graph in the earlier activity when needed.

1. Imagine a bug that is moving twice as fast as the ladybug. On each tick-mark diagram, mark the position of this bug.

2. Plot this bug's positions on the coordinate axes with lines u and v, and connect them with a line.

3. Write an equation for each of the three lines.

Images for Activity Synthesis