Course: Grade 6 Math

Lesson: L9.7

Title: Rates and Ratios with Equations Part 2

Core Standard(s):
6.PR.A.3

Learning Objective(s):
Write equations to describe ratios.

Graph ratios

Essential Question(s):
How are ratios related to fractions and decimals?
What does it mean for ratios to be equivalent?
In what ways do ratios apply to real world problems?

Required Materials and/or Preparation: Elevate Slides
Pacing of the lesson: 45 minute lesson

Notes:	*Common misconceptions to consider:* CCSS.MATH.CONTENT.6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. This lesson focuses on being able to graph a ratio relationship as well as pull a ratio from a graph	
Lesson Plan	**Timing**	**Lesson Explanation**
Warm-Up 	5 min	*Warm-Up – Plotting (Slide 4 - 5)* Goal: For students to remember how to plot points. • Give students 2 to 3 minutes to complete. • Allow 1 to 2 minutes to discuss why they chose those answers.

I Do 	5 min	*I Do (Modeling) – Graphing Ratios (Slide 6 - 14)* Goal: To model how to set up ordered pairs from a ratio and how to graph them. ● Go through the slides, getting student feedback. ● Remind students about tables, and how we have graphed in the past. ● Explain the big difference now, is that there is meaning behind what we are graphing.
We Do 	5 min	*We Do (Guided Practice) – Graphing Ratios (Slide 15 - 18)* Goal: To guide students in graphing a ratio. ● More practice on graphing, when given a ratio. ● Be sure to ask questions about why we are graphing and what the graph can help students visualize. ● Allow student input, before moving to you do.
You Do 	5 min	*You Do (Independent Practice) – Graphing Ratios (Slide 19 - 22)* Goal: To let students practice graphing a ratio. ● This should be student driven. Allow them to complete all the steps. ● Use portal tools for student responses.
Summarize 	3 min	*Summarize (Slide 23 - 24)* Goal: For students to think about the different ways they have solved ratios and think how graphs could be useful. ● Get students to use portal tools to respond.
I Do 	5 min	*I Do (Modeling) – Using Graphs with Ratios (Slide 25 - 33)* Goal: To show students how to identify information from a graph. ● Show students the graph and have them make observations. ● Have them explain how to find the missing piece of information. ● Allow student input, before moving to we do, and you do.

We Do 	3 min	*We Do (Guided Practice) – Using Graphs with Ratios (Slide 34 - 37)* Goal: To guide students how to find missing data from a graph. • Again, start with students making observations about the graph, "What information is shown, How do you know?" • Allow student input, before moving to you do.
You Do 	6 min	*You Do (Independent Practice) – Using Graphs with Ratios (Slide 38 – 41)* Goal: To let students practice finding data from a graph. • Let students do the work, take responses using portal tools.
Summarize 	3 min	*Summarize (Slide 42 - 43)* Goal: To summarize information students learned today. • Have students share feedback on the method learned today. • Are other methods more effective?
Conclusion/ Exit Ticket 	5 min	*Summarize (Slide 44)* • Give QZ here
Supplemental Activities		• **Skills based/reinforcement/remediation:** o **Online:** o **In Person:** Make problems for each other to solve. • **Enrichment/extension of material:** o **Online: In-Person:** Make problems for each other to solve.

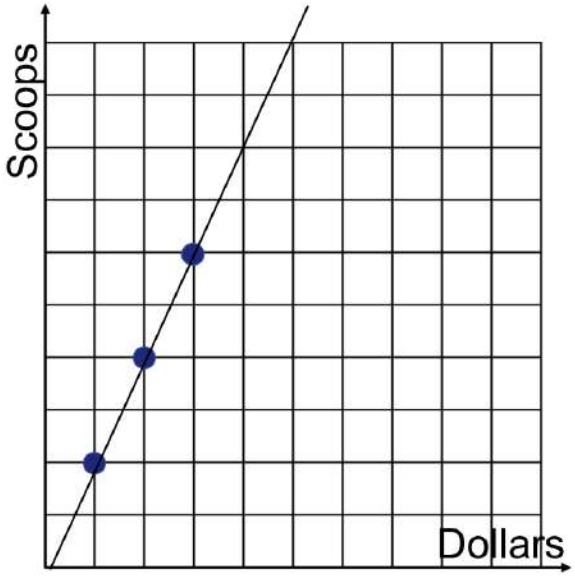
L9.7 QZ Questions.

What is the ratio of Miles to Hours shown in the following table?

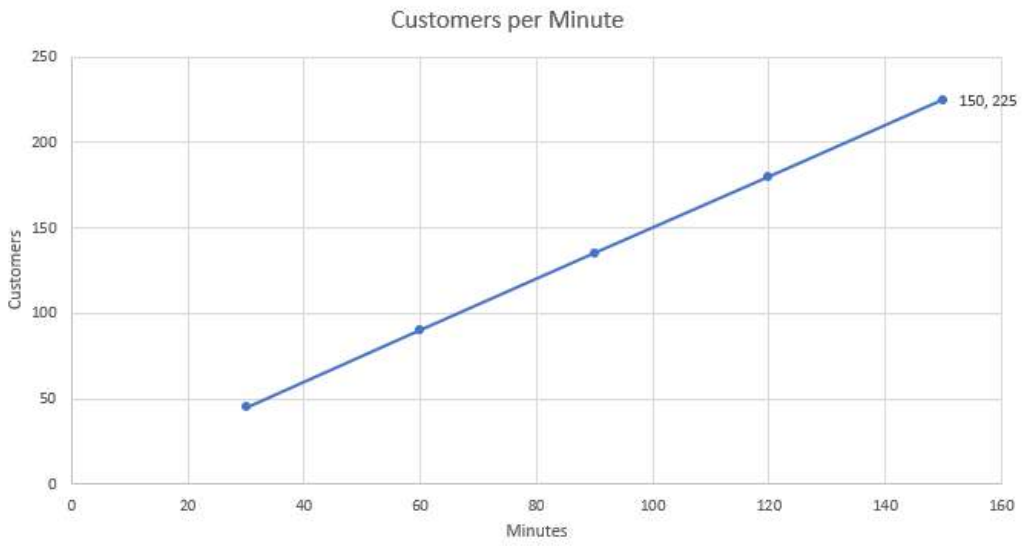
Miles	Hour
50	1
100	2
150	3

50:1

What is the ratio of Scoops to Dollars shown in the following graph?



2:1



What is the rate shown in this graph?

3/2 customers per minute

How many miles will there be in 3 hours?

150 miles

Using the graph below, how many hours until 200 miles?

4 hours