Rate and Ratio Problem Set: Participant

Lesson 15: A Synthesis of Representations of Equivalent Ratio Collections

Classwork

Exploratory Challenge

At the end of this morning's news segment, the local television station highlighted area pets that need to be adopted. The station posted a specific website on the screen for viewers to find more information on the pets shown and the adoption process. The station producer checked the website two hours after the end of the broadcast and saw that the website had 24 views. One hour after that, the website had 36 views.

Exercise 1

Create a table to determine how many views the website probably had one hour after the end of the broadcast based on how many views it had two and three hours after the end of the broadcast. Using this relationship, predict how many views the website will have 4, 5, and 6 hours after the end of the broadcast.

Exercise 2

What is the constant number, c, that makes these ratios equivalent?

Using an equation, represent the relationship between the number of views, v, the website received and the number of hours, h, after this morning's news broadcast.

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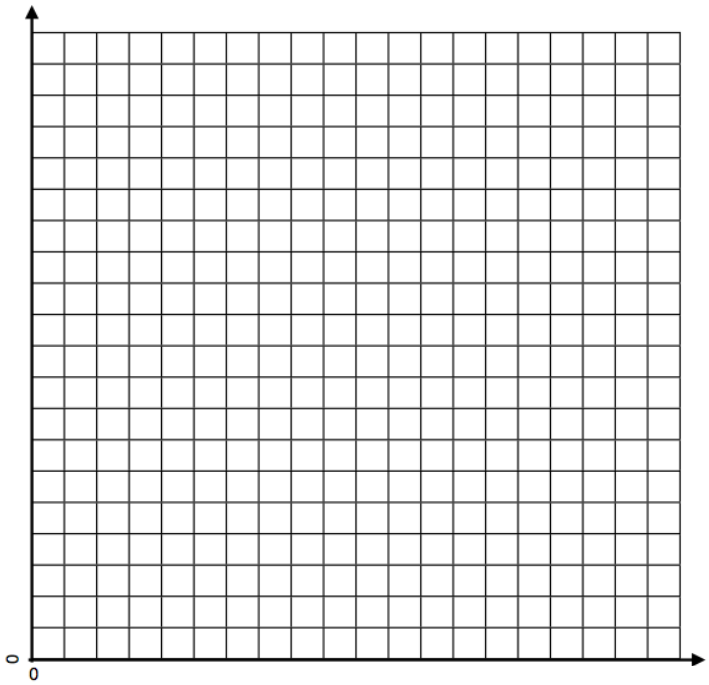
Exercise 3

Use the table created in Exercise 1 to identify sets of ordered pairs that can be graphed.

Exercise 4

Use the ordered pairs you created to depict the relationship between hours and number of views on a coordinate plane. Label your axes and create a title for the graph. Do the points you plotted lie on a line?



Exercise 5

Predict how many views the website will have after twelve hours. Use at least two representations (e.g., tape diagram, table, double number line diagram) to justify your answer.

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