Proportional Reasoning

Why are we studying this?

A ratio is a multiplicative comparison of two quantities and proportions allow us to scale up or down data while keeping the ratio intact. Being able to construct and use proportions we can find missing data from a graph, table or situation such as in:

- Recipe Conversions
- Reading Maps
- Comparing Speed and Distance
- Making Scale Drawings

Sample question we will be able to answer:
How many scoops of sugar and how many scoops of water will make the perfect cup of lemonade?

Fresh Squeezed Ice Cold LEMONADE

Dear Student & Parent/Guardian,

We are excited to begin the school year with a unit that will understand and apply proportional relationships to help us determine the best deal, fastest rate and how to scale data!

Some data collection we will do to determine proportional relationships and unit rates includes eating pretzels, doing jumping jacks, pushing hot wheel cars and watching the Cyberchase kids compete in a race on brooms!
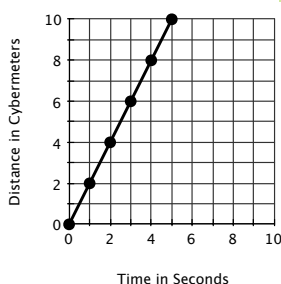
-AUHSD Math Teachers

Essential Questions Addressed in this Unit:

- What is a unit rate?
- Are these data proportional?
- Which method is most helpful to solve in each situation?
- What is the constant of proportionality?
- What has a better unit rate?
- When do I use proportional comparisons?

What is Inez's unit rate?

(Graph: Distance in Cybermeters vs Time in Seconds)

Subtopics Include:

- Unit Rate
- Understanding the Constant of Proportionality in Tables, Graphs, Equations, Diagrams and Verbal Descriptions
- Slope
- Similar Figures
- Application Problems Involving Proportions

A Note About Homework:

Homework in this unit will focus on concepts learned prior years, necessary for success in Math7, as well as current topics including writing ratios and solving equations. Other homework topics include:

-Multiplication and Division of Whole Numbers

-Multiplication and Division of Fractions

-Translating Expressions to Algebraic Expressions