

Major Learning Targets for This Course

Ratios and Proportional Relationships

Students will understand and analyze proportional relationships and use them to solve problems.

"I can recognize a situation that describes a proportional relationship."

"I can use proportional reasoning to solve problems."

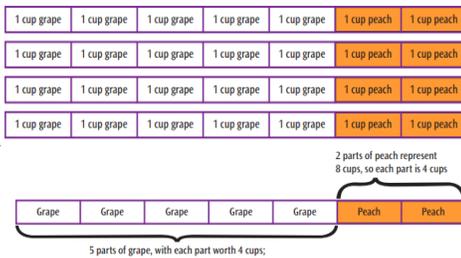
"I can use different visual representations to solve problems about proportions."

Example Task:

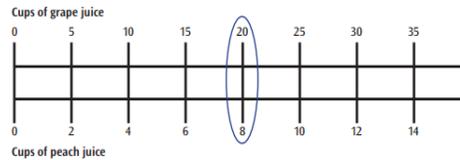
A juice mixture calls for 5 cups of grape juice for every 2 cups of peach juice. How much peach juice would you need to add to 20 cups of grape juice?

Does your answer make sense? How do you know?

Use a Tape Diagram



Use a Double Number Line



Use a Table

Additive Structure Table

Cups of Grape	Cups of Peach
5	2
+5	+2
10	4
+5	+2
15	6
+5	+2
20	8
+5	+2
25	10

Multiplicative Structure Table

Cups of Grape	Cups of Peach
5	2
$\times 2$	$\times 2$
10	4
$\times 3$	$\times 3$
15	6
$\times 4$	$\times 4$
20	8
$\times 20$	$\times 20$
100	40

Expressions and Equations

Students will write expressions and equations in one variable and use these equations to solve problems.

"I can use variables to represent quantities in a real-world or mathematical problem."

"I can write equations and inequalities to solve problems."

"I can use different visual representations to solve equations."

\$52.50			
p	p	p	\$11.25

Example Task:

The youth group is going on a trip to the state fair. The trip costs \$52.50 per student. Included in that price is \$11.25 for a concert ticket and the cost of 3 passes, 2 for rides and 1 for game booths. Each of the passes costs the same price.

Write an equation representing the cost of the trip, and determine the price of 1 pass.

Statistics

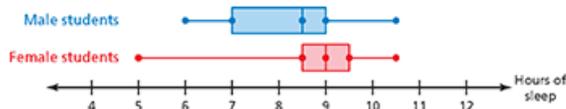
Students will make inferences about populations based on samples and develop, use, and evaluate probability models.

"I understand that we can use data from a representative sample of a population to make predictions."

"I can use median, mean, interquartile range, and mean absolute deviation to infer about comparisons of two populations."

"I can use organized lists, tables, tree diagrams, and simulations to find probabilities of compound events."

Example Task:



Given the distributions shown, what inferences can be made about the amount of sleep that students are getting each night? Use measures of center and variability to support your conclusions.

Expected Behaviors in Math Class

Students will...

- Check into Google Classroom daily for announcements and to receive/turn in assignments.
- Attend live/recorded Zoom learning and support sessions, with the camera on when feasible.
- Consider available tools to help them solve problems (including hands-on tools and technology).
- Use technology and various applications to explore and deepen understanding.
- Explain their thinking and their process to solving a problem.
- Communicate ideas clearly verbally and in writing, using math vocabulary when appropriate.
- Decide if their answer is reasonable.
- Use examples and counterexamples to justify a conclusion.
- Apply mathematics to solve problems in everyday life.

How Can I Support My Student in This Course?



Access Google Classroom Daily

- ⇒ Look at the Stream for daily announcements and a weekly schedule.
- ⇒ View the Classwork for assignment information and support.
- ⇒ Accept the Guardian Access request sent to your email address for regular updates on your student's progress.



Encourage Multiple Representations of the Problem

- ⇒ Ask your student to solve the problem in different ways, and to make connections between the different representations.
- ⇒ Ask your student to create visual representations help understand the concepts.



Ask Questions

- ⇒ When your student is stuck, ask him/her questions like: "What is the question in the problem/task?" or "What do you understand/know from the task?" and "How do you know?" Listen while your student explains his/her mathematical reasoning and ask "Does your answer make sense?" based on the context of the problem or task.
- ⇒ Guide your student to participate in small group discussions via Zoom to get questions answered or to send a private message to his/her teacher using Google Classroom.



Value Mistakes

- ⇒ Students are learning when they are making mistakes; create an environment where your student feels comfortable making a mistake and learning from it.



Don't Simply Tell Them the Right Answer

- ⇒ Once students are aware that their answer is right, they are more likely to stop thinking about the math. Instead of telling students the right answer, ask them a question or have them draw a picture.



Praise Effort

- ⇒ When your student gets a right answer, acknowledge how hard they must have worked and practiced.
- ⇒ When your student is stuck, acknowledge that sometimes math is challenging and that if they continue to practice and work hard, they will improve.

For more information, visit scusd.edu/math or contact Mikila-Fetzer@scusd.edu, Math Coordinator