☆**M**STAR
INTERVENTION

Lesson: Closure

Lesson Objective

- Students will discuss proportionality and some of its real-life applications, connecting the course material to the information the video presents.

Instructional Materials

Material	Quantity	Description
Computer with Internet access and speakers	1	To watch a video, found at: www.archive.org/details/NASA_Science_Earth_Clip14_HD
Projector	1	
Display Master	1	Questions for Discussion
Handout	1 per student	Questions for Discussion
Answer Key	1	Questions for Discussion

Preview

This lesson provides students with an opportunity to connect the mathematical ideas taught throughout the course with the video clip presented at the beginning of the course. Students will discuss the examples presented, incorporating the knowledge they have gained from the course.

Engage Acquired Knowledge

Ask students questions about their learning experiences in this course, such as:

- What did you learn about proportions?

- What does a proportion look like?

- How do proportions relate to ratios?

- What methods can be used to prove proportionality or to find a missing value in a proportion?

- When might you use a proportion in your life?

- What are other real-world examples from the course that demonstrate proportionality?

- What was your favorite part of the course? What was your least favorite part of the course? Explain.

- What was the easiest part of the course? What was the hardest part of the course? Explain.

Revisiting the Hook

Show students the video from the beginning of the course. The video can be found at:

www.archive.org/details/NASA_Science_Earth_Clip14_HD

This video provides students with an initial definition of proportionality. The video also provides examples of how racing and architecture use proportionality. Cyclists can use a test run to prepare for a race. To anticipate potential challenges, architects can build a smaller-scale stadium before building an actual stadium. Art and cooking also use proportionality.

Discussion

Distribute the Questions for Discussion handout. Tell students to think about the questions while watching the video. After watching the video, prompt student discussion by going over some possible answers, which are listed below:

- For what professions is proportionality important? Explain. (answers will vary)

- What mathematical ideas that you learned in this course did you see in the video? (answers will vary)

- What proportion could you set up to find the time it would take for Van to finish his real race if his test run took him 30 minutes to finish?

$$\frac{1}{25} = \frac{30 \text{ minutes}}{x \text{ minutes}} \; ; \; \frac{25}{1} = \frac{x \text{ minutes}}{30 \text{ minutes}} \; ; \; \frac{1}{30 \text{ minutes}} = \frac{25}{x \text{ minutes}} \; ; \; \frac{30 \text{ minutes}}{1} = \frac{x \text{ minutes}}{25}$$

- What proportion could you set up to find the length of the football field in the model if the length of the actual field is 3,600 inches?

$$\frac{1 \text{ model inch}}{1,200 \text{ actual inches}} = \frac{x \text{ model inches}}{3,600 \text{ actual inches}} \; ; \; \frac{1,200 \text{ actual inches}}{1 \text{ model inch}} = \frac{3,600 \text{ actual inches}}{x \text{ model inches}} \; ;$$

$$\frac{1 \text{ model inch}}{x \text{ model inches}} = \frac{1,200 \text{ actual inches}}{3,600 \text{ actual inches}} \; ; \; \frac{x \text{ model inches}}{1 \text{ model inch}} = \frac{3,600 \text{ actual inches}}{1,200 \text{ actual inches}}$$

- This is the second time you have watched the video. Is there anything you noticed this time that you did not notice before? Did you think about the information differently? Explain. (answers will vary)

- How do you think using proportions will help you in math class? In the real world? Explain. (answers will vary)

Use the Questions for Discussion display master as needed.

Closure

Review examples of how proportionality is used in the real world. Summarize the concepts presented in the video and in the course.