Baseball Proportion: Teacher Notes

Sunshine State Standards

MA.A.3.3.3
MA.B.1.3.3
MA.B.2.3.1
MA.E.1.3.1
MA.E.3.3.1

Math Abilities

Conceptual Understanding
- Proportional Reasoning
- Scale Factor
- Similarity

Procedural Knowledge
- Solve Proportions

Process Standards

Problem Solving
Reasoning
Communication
Connections
Representation

Hook

Have one student model a batting stance with a regulation size baseball bat. Have another student model the batting stance with a souvenir miniature baseball bat. Ask the class, “Why does the student with the souvenir bat look so funny?”

Group Arrangement

Students work in individually or in pairs

Tools

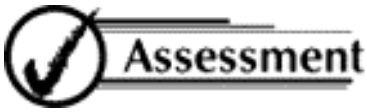
- 1 regulation-sized baseball bat
- 1 souvenir miniature baseball bat
- 1 piece of posterboard for each student
- 1 metric measuring tape for each student

Procedure

1. Measure the length of the regular bat in centimeters.
2. Measure the length of the souvenir bat in centimeters.
3. Measure the height of the student holding the regular bat.
4. Determine how tall a person should be in order to be proportional to the souvenir bat.
5. Using the posterboard, draw a cut-out figure whose height is proportionally correct for the souvenir bat.
6. Have students show their work and/or explain in words the process for determining the correct height of the figure on the posterboard.

Math Connection

As a result of this activity, students learn to use ratios and proportions to solve real world problems involving models and drawings.



Rubric (4 points):

- Assignment is completed on time.
- Figure's height measures within 0.5 cm of the correct height.
- Written explanation shows good thinking and calculations are correct.
- Poster board figure is neat and creative in design.