

WALKING HOME

Performance Standard 8D.G

Analyze a situation involving distance traveled in a given period of time when rate is provided, represent this situation tabularly, graphically or algebraically, and explain their reasoning:

- *Mathematical knowledge*: Determine distance traveled in given period of time when the rate is provided;
- *Strategic knowledge*: Solve problem using tables, charts, graphs or equations;
- *Explanation*: Explain completely what was done and why it was done.

Procedures

1. Provide students with sufficient learning opportunities to develop the following in order to use algebraic concepts and procedures to represent and solve problems:
 - Solve simple linear problems using direct variation with linear coefficients using algebraic or graphical representations.
2. Provide students with the assessment task worksheet. Have students work individually. Scientific calculators may be used, graphing calculators should not.
3. Use the standard scoring rubric. Give each student a score in each of the three categories. A score of 4 should indicate completely correct solutions to all parts of the problem, with complete and correct justifications of their reasoning. A three should represent correct or nearly correct solutions to all parts, with only minor computational errors making their solutions inaccurate, their rationale should be sound, but may not be completely explained. A two would indicate that students have some idea about how to answer the questions, but make major errors in computation and or reasoning that effects their answers. A one may have a correct answer for one part, but generally shows little understanding in their rationale for their procedures and processes. A score of zero generally reflects no correct responses and no logical rationale for their procedures and processes.
4. Minor errors in computation include making errors in the actual addition or multiplication, rounding incorrectly. Major errors include using the wrong operations or formulas to relate terms.
5. Janae will not arrive home on time. If she travels 3 blocks every 5 minutes that means it will take her 25 minutes to walk the 15 blocks. That will get her home 5 minutes late. Students should demonstrate proportional reasoning in this part of the task, or use the idea that her rate times time will equal the distance traveled. They may use tables, or charts, or graphs to solve this or they may set up an equation.

Examples of Student Work not available

Time Requirements

- 10 - 15 minutes

Resources

- Copies of the “Walking Home” task sheet
- Writing utensil
- Scientific calculators may be used
- Mathematics Rubric

NAME _____ DATE _____

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Student Task Sheet

Solve the following problem, and explain your solution thoroughly.

Janae walks home from school everyday. School is out at 3:15PM and she is supposed to be home by 3:45 PM. The school is 15 blocks from Janae's home. If Janae stays around after classes for 10 minutes before leaving school, and then starts walking at a rate of 3 blocks every 5 minutes, will she arrive home before 3:45? Why or why not?