

Grade 7

Trivia Game Scores

Math Task

2015-2016 NYC End-of-Year Performance Tasks

Instructions

- Tasks may not be shared with students prior to administration.
- If the above-named NYC Performance Task is being administered for evaluative purposes, the End-of-Year task may be administered by the regular classroom teacher but **may not be scored** by the regular classroom teacher.
- Distribute one task booklet to each student.
- All student work should be completed in the task booklet. All student work in the task booklet should be scored, regardless of whether the student completed or attempted every question.
- Students should have 90 minutes to complete the task, not including the distribution and collection of materials.
- Depending on school scheduling, administration may occur over 1-2 days. Administration conditions (i.e., the amount of time students have to complete the task, etc.) should be consistent across all classrooms in the school administering the above-named NYC Performance Task.
- Students should receive all accommodations normally provided for a class or state test.
- All students must sign the Student Honor Code below at the completion of the task.
- For complete administration information, see the MOSL Assessment Administration Handbook.

Student Honor Code



I affirm, at the close of this examination, that I had no knowledge of the questions or answers prior to the task administration and that I have neither given nor received inappropriate assistance in answering any of the questions during the task administration.

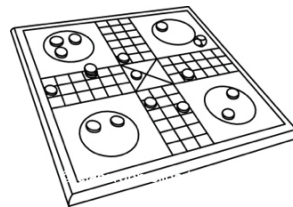
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Student Signature

Student Name

Trivia Game Scores

Andy and Ben are playing a trivia game. Andy is trying to decide the best strategy for the game. Andy is keeping track of his scores in the list below.



Andy's Game Scores

| Game | Points Scored | Questions Answered Correctly |
|--------|---------------|------------------------------|
| Game 1 | 173 | 78% |
| Game 2 | 120 | 32 out of 40 |
| Game 3 | 148 | 0.76 |
| Game 4 | 24 | $\frac{1}{4}$ |

1 Ben sees the list and says, "It looks like you have a total of 495 points."

Is Ben's answer reasonable? _____

Explain by estimating. Show your work.

Name: _____ Date: _____

- 2 The trivia game Andy and Ben play scores differently than most games. Players earn 4 points for each correct answer, but lose 1 point for each wrong answer. When a player passes on a question, they receive 0 points. Andy figures out that if they play a game and he answers 50 questions, his total score is represented by the following expression, where w is the number of wrong answers:

$$4(50 - w) - w$$

Ben says that the expression $5(40 - w)$ could also be used to represent the number of points Andy would score if he answered all 50 questions.

Is Ben correct? _____

Show your work.

Name: _____ Date: _____

Andy's Game Scores

| Games | Points Scored | Questions Answered Correctly |
|--------------|----------------------|-------------------------------------|
| Game 1 | 173 | 78% |
| Game 2 | 120 | 32 out of 40 |
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| Game 4 | 24 | $\frac{1}{4}$ |

3 Look at the table above. On which game does Andy score his highest percentage of correctly answered questions?

Show your work.

Name: _____ Date: _____

- 4 One question in the trivia game asks Andy and Ben to convert kilometers to miles. The trivia card states, "To convert kilometers to miles, multiply the number of kilometers by 0.62."

Write an equation to convert kilometers (k) to miles (m) according to the trivia card's description.

Using the equation, convert 50 kilometers to miles.

_____ miles

- 5 Ben thinks that he could multiply the number of kilometers (k) by $\frac{7}{10}$ and then subtract 8% of the number of kilometers (k) to convert to miles (m).

Will Ben's method work to convert from kilometers (k) to miles (m)? Explain.

Name: _____ Date: _____

- 6 While Andy's strategy is to answer all of the questions in each game, Ben has decided that he should only answer the questions he is sure of. In Game 1 he answered 48 questions, and in Game 2 he answered 32 questions. All of the questions he answered were correct.

How many points did Ben score on Game 1 and Game 2 altogether? *Questions answered correctly are worth 4 points each.*

_____ points

Show your work.

Name: _____ Date: _____

- 7 Andy and Ben are going to play a final round in Game 5 to determine the winner. Andy decides to answer only the questions he is sure of. He calculates he can correctly answer $\frac{9}{10}$ of the questions (4 points each), and lose 1 point each for the $\frac{1}{10}$ of the questions he answers incorrectly. He needs a score of at least 145 to win the game.

Write and solve an inequality to find the minimum number of questions that Andy must answer, if his thinking is correct, to score at least 145 points.

Minimum number of questions to answer _____

Show your work.