

# Make a Math Test Question

Subject \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## **Assignment Summary**

Being able to write a great math problem is a sign you really know the math. Fortunately for you, the state testing department is hiring! Test making is a million-dollar industry, and the people writing the test questions are making lots of money. With excellent math knowledge and the ability to write a good question, you could get a piece of this action.

<b>Writer's Purpose</b>	To create a good assessment, you must be clear and fair. This type of writing requires both creativity and logic. The goal is to design a question that will show if students understand a mathematical topic.
<b>Writer's Role</b>	You are looking for a job as a test maker. You know the math and need to prove to the state department of education that you can do the job.
<b>Audience</b>	You are writing for students at your grade level who supposedly learned the material.
<b>Form</b>	You will write either an open-response question, similar to the ones we've been studying, or a multiple-choice question. The open-response question will have a graphic. It can't be too hard or too easy. The multiple-choice question will have a graphic as well and four thoughtful choices, all tempting, but only one correct.
<b>Focus Correction Areas<sup>SM</sup> (FCAs)</b>	<p>For multiple-choice questions:</p> <ul style="list-style-type: none"> <li>• Question is fair, clear, and solvable (30)</li> <li>• 4 choices (3 tempting and 1 correct choice) (40)</li> <li>• 3 or more math words and/or test words used correctly (15)</li> <li>• Clear, labeled graphic (15)</li> </ul> <p>For open-response questions:</p> <ul style="list-style-type: none"> <li>• Real-world introduction (10)</li> <li>• Labeled graphic (20)</li> <li>• Fair, clear, solvable two-part questions (50)</li> <li>• 4 test words and/or math words (20)</li> </ul>
<b>Procedure</b>	<p>To help you develop your test questions, we will do the following:</p> <ul style="list-style-type: none"> <li>• We will look at several past questions from previous units.</li> <li>• Type One Writing: What do all these questions have in common? OR What are the characteristics of a good and bad question?</li> </ul>

- After a discussion, we will make a list of characteristics and common features and structures of math problems.
- We will do one or more of the following, depending on previous experiences with this assignment:
  - Practice looking at a graphic and making up introductions, questions, and false answers.
  - Practice looking at topics and decide which graphics and questions will go with them.
  - Practice how to pick numbers that work well for math problems and how to work backwards from a solution.
  - Brainstorm key math terms that may be included in this problem.
  - Brainstorm key “testing” words that might be included in good questions (e.g., identify, explain, solve, example, determine, etc.).
- I will model writing a good question, asking for your help at different parts.
- After reviewing the FCAs, you will write your question.
- Show me you have followed each of the FCAs. Underline your real-world introduction. Number the two parts of your open-ended problem. Box your labeled diagram and highlight each label. Circle your math/testing words.
- Read your question out loud in a one-foot voice. Listen to be sure your question makes sense. Make any changes you think will make your question better or easier to read.
- Read your question out loud to a partner and see if they can answer it. Make corrections if you catch a mistake.
- Submit your question for teacher feedback.

\*\*Optional: Instead of using standard lined paper, you may choose to have students write each question on a lined notecard or smaller sheet of lined paper to simulate game cards. In this case, students would record the question on the front and the answer on the back. After teachers provide feedback (and corrections are made, if necessary), you can use these questions for class practice and review.