



THE 2010 HAWAII EDUCATION ASSOCIATION PROBLEM-SOLVING COMPETITION
For Students in Grades 6, 7 and 8

Application and Information at www.heaed.com.

1. This contest is open to **ALL** students in grades 6, 7 and 8 enrolled in public schools. Each student is invited to submit an entry to his/her teacher in accordance with the rules given in the following paragraphs. The teacher will select **no more than three entries per class to send to HEA.**
2. **FORMAT**
 - a. The student may submit **only one** entry whether as an individual or as a member of a pair.
 - b. The entry should be no fewer than 400 words and no more than 1,000 words, computer-generated or typewritten on one side only, and double-spaced. Any graphs, charts, or diagrams used in the student's solution **MUST BE "CAMERA READY" and BLACK AND WHITE.** Colored examples and videos will be considered for judging but will not be published.
 - c. The entrant's name(s) should **NOT** appear on any of the manuscript pages.
 - d. The **FULL TITLE** should be stated at the top of the **FIRST PAGE.**
 - e. A **COVER FORM**, giving HEA the right to publish the entry if it is a winner, shall be attached to the manuscript. The form accompanies these rules. Both the form and the rules may be duplicated.
3. The problem used in this contest is "open-ended." There may actually be several ways to solve the problem, and the contest is designed to assess both problem-solving ability and the language skills used to write about the procedures used in addressing the problem. The problem to be considered in 2010 follows:

MY DREAM BEDROOM

When your great-uncle Masa died in 2005, his attorney notified your parents that Masa had opened a savings account in your name to start a college fund for you. In January 2000, he deposited \$5,000 at 3.5% interest compounded annually. Your parents have agreed to let you use half of the money in your account at the end of 2009 to redecorate the interior of your bedroom into a teen room where you can study and relax.

- A) Determine the amount of money in your account at the end of 2009. Explain and show all of your formulas and calculations to get your final answer.

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- B) Make a scale drawing of your bedroom on grid paper and include the scale factor. Label and explain all parts and include all measurements.
- C) Make a chart of all items to be purchased for your room. Include the item, including brand name, where it will be purchased, cost, tax and the total cost for the whole project.
- D) Write a persuasive letter to your parents explaining how you are going to spend your money, justifying how this dream bedroom will increase your ability to study. Remember you must "sell" this idea and each item you are purchasing to your parents or they can reject certain items or even the entire project. What will it be?

The following Hawaii Content Performance Standards 3 may be covered.

MA 6.2.2; 6.3.1; 6.4.3; 6.7.1; 6.7.2; 6.9.1; 6.10.1;

MA 7.1.1; 7.1.4; 7.2.2; 7.4.2; 7.10.2;

MA 8.3.1; 8.4.1; 8.10.1

- 4. The HEA Mathematics Problem-Solving Competition Scoring Rubric (8/12/08) will be used in scoring entries. Depending on the quality of the entries received, the judges reserve the right to award or not to award prizes. They will assign scores based on problem-solving ability and on language skills. In general, judges will use the following criteria:

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**HEA Mathematics Problem-Solving Competition
Scoring Rubric
(8/12/08)**

CRITERIA	DEFINITELY	SOMEWHAT	NONE N/A	COMMENTS
Have all key elements of the problem been addressed?				
Is the solution correct?				
Are strong supporting arguments for the solution included?				
Does the presentation indicate an understanding of the open-ended problem's ideas and processes?				
Is there a clear understanding of the concepts?				
Is communication in the paper effective?				
Is there evidence of innovative thinking?				
If the problem requires an extension, is it innovative and effective?				

5. Suggestions for Producing Quality Mathematics Problem-Solving Documents

- a. If necessary, research your question: Internet, library, interviews.
- b. Brainstorm ideas and process with teacher and peers. Take time to think about creative ideas and ways of combining ideas.
- c. Have your teachers check your drafts for correctness of mathematics and grammar.

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d. These are what the judges will be looking for in choosing the top papers:

1. creativity, quality and correctness of ideas
2. clarity and correctness in both mathematics and writing
3. quality coverage of all of the objectives listed in the problem
4. appeal and appropriateness of drawings and tables.

6. DEADLINE: ENTRIES MUST BE RECEIVED BY 12:00 NOON ON FRIDAY, FEBRUARY 26, 2010.

7. PRIZES:

First Place	\$75
Second Place	\$50
Third Place	\$40
Four (4) Honorable Mentions	\$10/each

8. In this contest, only the first place winner is assured of having his/her entry printed in *Write On, HEA! 2010*. Every winner, however, and his/her teacher, will be presented with two complimentary copies of the HEA publication.

9. **Send entries to:**

Problem-Solving Contest Chairman, Grades 6-8
Hawaii Education Association
1953 South Beretania Street, Suite 3C
Honolulu, HI 96826