

MATHEMATICAL CONCEPTS

GENERAL CONTEST RULES:

This contest will be an individual event. **The contestant must be a current 9th or 10th grade student.** Each student will be given an individual test of 50 computation problems, applications and terms. The written objective test may consist of items such as questions on basic math concepts, decimals, fractions, percentages, estimation, ratio and proportion, measurements, discounts, interests, time, and salary. The resulting score will be graded on a scale of 0 –100. A chapter may enter only one student currently enrolled in the 9th or 10th grade to compete in the Mathematical Concepts contest. Calculators may be used but must be furnished by the student.

All contestants will take the PDP test and this score will be used in the event of a tie. Contestants will submit a resume.

PURPOSE:

- to demonstrate competency in basic math computations and problem solving
- to develop an appreciation for competition
- to relate math and technical instruction to workplace readiness

ELIGIBILITY:

Open to one active 9th or 10th grade SkillsUSA member per chapter.

SUBMISSION:

Contestant will take an onsite test.

CLOTHING REQUIREMENTS:

For Men:

Official red blazer or jacket, black dress slacks, white dress shirt, plain black tie with no pattern or SkillsUSA black tie, black socks, and black shoes OR Professional/business dress.

For Women:

Official red blazer or jacket, black dress slacks or skirt, with businesslike white, collarless blouse or white blouse with small, plain collar that may not extend onto the lapels of the blazer, black sheer or skin-tone hose, and black shoes OR Professional/business dress.

AWARDS:

Gold, Silver and Bronze medals will be awarded for 1st, 2nd, and 3rd place. The winner of this contest does not advance to the National SkillsUSA Leadership and Skills Conference.

EVALUATION CRITERIA:

1. Written Test – 100%

SAMPLE QUESTIONS:

1. What is the value of $(3+2)^2 - 12/4$?
 - a. 22
 - b. 23
 - c. 24

d. 25

2. If $0.4 < x < \frac{1}{2}$, x could equal:

- a. 40%
- b. 45%
- c. 50%
- d. None of the above

3. Round 765.29087 to the nearest ten thousandth.

- a. 765.290
- b. 765.291
- c. 765.2908
- d. 765.2909

4. Jada just finished a delicious meal at her local restaurant and her bill was \$12.79 including tax. If Jada wants to leave at least a 20% tip and only wants use dollar bills, no change, how many dollars should Jada leave for a tip?

- a. \$2.00
- b. \$2.50
- c. \$2.56
- d. \$3.00

5. What is the area of a rectangle if the sides are 8 inches by 4 inches?

- a. 24 square inches
- b. 32 square inches
- c. 48 square inches
- d. 64 square inches

MATHEMATICAL CONCEPTS

Items Evaluated	Possible Points													
Written Test														
A 50 question test of applications and mathematical terms	100													
Subtotal Points	100													
Point Deduction														
Dress Code Violation	-25													
Total Points														