

**2010 MICHIGAN SKILLSUSA CHAMPIONSHIPS
TASK & MATERIALS LIST**

SKILL OR LEADERSHIP AREA: Related Technical Math

STUDENT MUST SUPPLY:

- 1 page resume
- Same supplies as listed in the SkillsUSA Championships Technical Standards
- Calculator (all types are acceptable)
- Blank scratch paper and pencils

NOTE:

- *Please refer to the 2010 Technical Standards for specific contest details.*

CLOTHING REQUIREMENT (if different from National contest):

- SkillsUSA official dress or professional attire
- No jeans
- No tennis shoes
- No heels over 2"
- No hats (unless part of industry standard dress)
- Shirts must cover midriff (waistline)

OBSERVERS ALLOWED IN ROOM DURING COMPETITION?

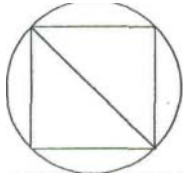
- No

Revised 1/6/10

Related Technical Math

Sample Questions

1. You have decided to build a log cabin out of the trees on your property. Most of the trees are more than 8 inches in diameter. What is the largest square timber that could be cut from an 8" log? (Remember to round down to the nearest $\frac{1}{2}$ inch.)

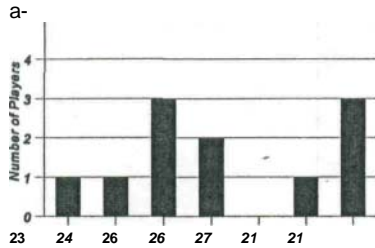


2. Americans are very generous, giving to various charities and religious organizations. In fact, 7.7×10^9 dollars are given per year by the 250 million U.S. citizens. Find the dollars given per citizen (to the nearest dollar). Use scientific notation.
3. A worker's basic hourly wage is \$10, but she receives one and a half times her hourly rate for any hours worked in excess of 40 per week. If her paycheck for the week is \$595, how many hours of overtime did she work?

4. Some stairs seem easier to climb than others. This is caused by their steepness which is the rise (up) over the run (tread). Find the angle (to the nearest tenth of a degree) of stairs that have a rise of 5 inches and a run of 6 inches.
5. Our forefathers made some great purchases as our United States grew from the 13 original colonies. The 1803 Louisiana Purchase from France was made for 15 million dollars, this included 8.28×10^5 square miles. Using scientific notation, find the cost per square mile to the nearest dollar.
6. A whale has a mass of 1.0×10^5 kg. A flea has a mass of 3×10^{-4} kg
What is the ratio of the mass of the whale to that of the flea?

7. Given the graph shown below, find the *mean* of the ages (to the nearest tenth of a year).

**Ages of U.S. Women Basketball
Players, 1992 Summer Olympics**



8. If the real estate company receives 6% commission, and the broker receives 57% of that company's commission, how much does the broker receive when he sells a house for \$105,900?
9. Within 24 hours in 1916, the temperature in Browning, Montana, fell from 44 degrees to -56 degrees. How large a drop in temperature was this?

SCORECARD Related Technical Math

Items Evaluated	Possible Points	Contestant Number							
Written Test	1000								
Résumé Penalty	0 or -50 only								
Clothing Penalty	0 to -50								
Total Possible Points	1000								

Date:

Judges' Signatures:
