



Technical Drafting

2023 SkillsUSA Michigan State Championships

Contest Description Task and Materials List

CONTEST LOCATION:

Amway Grand Hotel
303 Monroe Ave NW
Grand Rapids, MI 49503
616.742.6500

RESUME:

Each student must submit a one-page **printed** resume before the contest start at the contest site (present to contest coordinator, not judges). The resume is no longer submitted online. This is the only time that resumes can be turned in. Failure to do so will result in a 10 point penalty. These need to be given to coordinator when they check in for competition.

CONTEST RULES:

1. Once the contest begins no technical assistance will be given to the contestants. Only general instructions on contest procedure will be given.
2. Contestants must be dressed as follows **or they will lose points**:
 - White shirt (either dress or polo-style), no t-shirts
 - Dark dress slacks
 - Dress socks
 - Dress shoes
3. No electronics other than your computer. That means no cell phones, head phones, mp3 players, iPods, GPS modems, radios, Bluetooth devices, etc. – nothing wireless – no flash drives or memory sticks. No internet access will be allowed. All of the above will be monitored and anyone caught using these items will be disqualified.
4. **Contestants must bring a laptop and/or computer with their design software loaded. No internet access will be allowed.** Contestants **must** bring their own hardware and software.
5. Contest drawing requirements **may** include the following:
 - a. **Model** - create a model from an actual part given to the contestant, which is to be measured.
 - b. **Assembly** - create assembly drawings from various detail drawings. May include revisions, which must be notated correctly. More than one view may be included per sheet. Views should be spaced evenly and drawn to scale as well as ballooned / called out with appropriate numbers.
 - c. **Design** - given drawings/specs of certain parts, mating or corresponding part(s) must be designed and drawn (i.e., given A and C, must design B).
 - d. **2D Detailing** - given a large assembly drawing, contestant must pull out various parts and detail for manufacturing; details must be completely dimensioned and

- documented. Contestant may be required to pull out 3D solids and convert to 2D. Contestant may have to apply revisions.
- e. Judges will only evaluate information provided on the pdf drawings. 3-D files that do not have the appropriate 2-D pdf drawing will not be viewed.
 - f. Contest Completion – print in ‘PDF’ format to 8½” x 11” or 11” x 17” sheets, text must be legible.
 - g. Import pre-drawn CAD files (ex. iges file) into their software to complete a 3-D assembly. CAD files will be provided.
 - h. Measure an existing part using calipers to model and include on their project.

CONTEST INFORMATION:

1. Approximately 4-5 hours will be allowed for the entire. A specific time limit will be determined by the technical committee and given to the contestants during the contest orientation. Sketching and taking notes during the contest is permitted.
2. **Contestants should report to the competition area 30 minutes prior to the contest start time listed in the program.** Contestants finishing early will gain no advantage nor receive bonus points. However, it is suggested that the contestants remain in the designated area until their plots are completed. Then contestant **MUST** leave the contest area.
3. Contestants must be able to prepare their drawings for plotting. **Contestants will plot their drawings.** Contest officials may assist with plotting the drawings.
4. **FILE MANAGEMENT IS THE RESPONSIBILITY OF THE CONTESTANTS.**
 - a. NO pre-drawn CAD files are allowed unless it is part of the software package. Only software-provided library files will be allowed.
 - b. ***No zip, flash, floppy, or CD files are allowed.***
5. Contestants may bring published reference books including software manuals, technical drafting textbooks and Machinery's Handbook. Student notebooks and copied materials are not allowed. Resources must take up less than 1 cubic foot of space.
6. Contestants **must** bring the following items with them to the contest site: calculator, pencils, calipers, mechanical ruled scale and 1-page resume to be submitted at the start of the contest. (*Note: No other drafting equipment is required except for the items previously listed.*)
7. The contest will follow SkillsUSA National guidelines. Non-compliance with contest rules may result in disqualification.

All questions and potential changes must be addressed before April 4, 2023!

Revised 1/23/2023

NOTE: The attached scoring sheet is from the 2019 competition. This year's scoring will be similar, but changed to reflect the different parts students will be modeling and detailing.

Tech. Drafting Competitor: _____

High School: _____

Overall Place: _____

Post Secondary: _____

Exploded Assembly (200 pts.)	
	View (125 pts.)
	Parts List (50 pts.)
	Balloons (25 pts.)
Chamber (250 pts.)	
	Views (160 pts.)
	Dimensions (85 pts.)
	Call Out (5 pts.)
Shot Pin Bracket (75 pts.)	
	Views (50 pts.)
	Dimensions (20 pts.)
	Call Out (5 pts.)
Bushing Block (75 pts.)	
	Views (50 pts.)
	Dimensions (20 pts.)
	Call Out (5 pts.)
Chamber Window (75 pts.)	
	Views (50 pts.)
	Dimensions (20 pts.)
	Call Out (5 pts.)
Shot Pin (75 pts.)	
	Views (50 pts.)
	Dimensions (20 pts.)
	Call Out (5 pts.)
Rod End (75 pts.)	
	Views (50 pts.)
	Dimensions (20 pts.)
	Call Out (5 pts.)
Drill Bushing (75 pts.)	
	Views (50 pts.)
	Dimensions (20 pts.)
	Call Out (5 pts.)
Title Blocks (50 pts.)	
	Completeness of required items (50 pts.)
Written Test (50 pts.)	
	Test Score (50 pts.)
Resume	
	Penalty if not submitted (-10 pts.)
Dress Code	
	Penalty if not dressed properly (up to -50 pts.)
	Competitor Total Score (1,000 pts.):