

Layout Instruments Contest

Purpose

To evaluate each contestant's ability to perform the following tasks:

- Properly set up an automatic level
- Establish instrument height from an established benchmark (which is 4' 0" above finished floor)
- Determine the height of four objects above finished floor, 2 below the instrument, and two above the instrument

Eligibility

The apprentice competing at the District Council level must be an apprentice during the year he or she is competing to go onto the International Competition. The apprentice may come from any year apprenticeship. He or she may only compete at the International level once.

Clothing Requirement

Contestants must wear long pants, shirt with sleeves, work boots (no tennis shoes), hard hat.

Equipment and Materials

The following equipment will be provided by the contest committee:

- Automatic levels
- Tripods
- 5- 6' stick rules or measuring tapes
- Pencils
- Safety glasses with side shields (optional)
- Hard hats

The contestant may provide the following:

- Safety glasses with side shields (optional)
- Hard hat

Contest Guidelines

These guidelines will be followed during this contest:

1. Contestants will be randomly selected to determine the order in which they will demonstrate their ability to use layout instruments.
2. Contestants must wear their hard hat and safety glasses at all times when using the instruments.
3. Each contestant will be required to set up the automatic level.
4. Each contestant will correctly perform the following tasks:
 - Correctly set up and level an automatic level.
 - Establish the automatic level's height (AFF).
 - Determine the height above finished floor of the four objects.
 - All answers are to be +/- 1/16"

Judges Note: On the day of the competition the judges will establish a 4' 0" above finished floor (AFF) bench mark and establish two points above and two points below instrument height. The Judges will establish and **secure** rulers to these points to allow no deviation in readings between contestants. To avoid confusion label points as 4' bench mark and shot 1- 4.

5. The contestant must demonstrate correct safety practices at all times. The contest judges may stop a competitor at any time if they deem the contestant's manner to be hazardous to either themselves or others. Such stoppage will disqualify the contestant from that section of the contest. If the contestant is warned a second time, he or she will be disqualified as a contest participant.
6. While the contest is in progress, there shall be no communication between the contestants or between the contestants and anyone else except as directed by a judge or contest official.

Contest Scorecard

This contest will be scored as follows:

1. The Layout Instruments contest is worth ten (10) points.
2. Contestants will be given 30 minutes to perform the required tasks.

At the end of 30 minutes the contestant will be stopped and the work sheet collected. Points will be awarded for correct answers on the supplied work sheet at the end of 30 minutes.

3. Contestants will earn points as follows:
 - 2 points for the correct set-up of the automatic level
 - 2 points each for determining the correct elevation of the four supplied objects.
 - Answers must be within 1/16”.
4. Contestants should use the supplied worksheet to provide their answers
5. Contest judges should use the scoring sheet on the following page to record each contestant's times and then determine the points earned by each contestant.
6. These results will be submitted to the contest officials responsible for compiling the overall competition results.

Layout Instruments Contest Scoring Sheet

Contest Location: _____ Date: _____

Judges: _____

Contestant Number	Set up Level	Shot 1	Shot 2	Shot 3	Shot 4	Total Points
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
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17.						
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19.						
20.						
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						

Contestant Number	Set up Level	Shot 1	Shot 2	Shot 3	Shot 4	Total Points
29.						
30.						
31.						
32.						
33.						
34.						
35.						
36.						
37.						
38.						
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50.						
51.						
52.						
53.						
54.						
55.						
56.						

Contestant Number	Set up Level	Shot 1	Shot 2	Shot 3	Shot 4	Total Points
57.						
58.						
59.						
60.						
61.						
62.						
63.						
64.						
65.						
66.						
67.						
68.						
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78.						
79.						
80.						
81.						
82.						
83.						
84.						

Contestant Number	Set up Level	Shot 1	Shot 2	Shot 3	Shot 4	Total Points
85.						
86.						
87.						
88.						
89.						
90.						
91.						
92.						
93.						
94.						
95.						
96.						
97.						
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106.						
107.						
108.						
109.						
110.						
111.						
112.						

Contestant #

Layout Instruments Contest

Work Sheet

Start time: _____

End Time: _____

Directions:

Use the 4' benchmark to determine instrument height.

Using the auto level, determine the height above finish floor of shots 1-4.

Provide answers below.

Points will be awarded as follows: 2 points for proper set up, 2 points for each correct height.

Instrument Height is _____

1. _____

3. _____

2. _____

4. _____