

EVENT 6: SPAGHETTI MARSHMALLOW TOWER

(Revised 3/1/22)

OBJECTIVE: To construct a tower that will support a load of at least 375 grams

RULES:

- a. The tower must be designed and constructed entirely by the team from:
 - One box (500 grams) of commercially available spaghetti made only from semolina or flour and water with a diameter of not greater than 3.0 millimeters. No other form of pasta, such as fettuccine or bucatini (tubular spaghetti), or other materials
 - One bag (10 oz) of mini-marshmallows
 - No other materials are permitted to be used.
- b. The spaghetti may only be joined together using mini-marshmallows.
- c. Glue or any other material may not be used to coat the strands of spaghetti or the marshmallows
- d. The spaghetti may be cut.
- e. The marshmallows may not be cut.
- f. The tower must be at least 30 centimeters in height.
- g. The tower must be free standing: no part of the structure may be attached to any surface.
- h. The top of the tower must be able to accommodate a load of at least 375 grams in the form of 3 rolls of 50 pennies each. Pennies dated after 1982 with a mass of 2.50 grams are to be used.
- i. Marshmallows may not be used to hold (attach) the pennies together or to attach the pennies to the tower.
- j. Pennies may not be distributed throughout the tower

COMPETITION AND SCORING:

- a. The competition area may either be an all-purpose room cafeteria or a typical high school classroom containing tables or desks.
- b. The tower will be placed on a desk or on a tile floor.
- c. The team will have 30 minutes to assemble their tower and load pennies onto the top of their tower.
- d. Once assembled with the required load, the team will notify the judge(s) that their entry is ready to be judged
- e. In the case of a tie, the tower will be required to support additional pennies. The team will have 5 minutes to add additional pennies one at a time until the tower fails. It is the team's responsibility to ensure that the top of their tower can accommodate additional pennies. No additional assemble time will be permitted. If the tower cannot accommodate additional pennies, then the number pennies that remain at the top of the tower will be used as the score.

$$\text{SCORE} = \frac{(\text{Your height in centimeters}) \times 100 \text{ points}}{(\text{Winning height centimeters})}$$

DISQUALIFICATION SCORE = Ten points less than the lowest score for a qualifying tower that holds at least one roll of pennies but not less than zero. A qualifying tower meets the rules but does not hold the required load.

Testing procedures & scoring may need to be modified if the Olympics is held virtually.

Updates to the rules and Forum discussion / questions with answers are available by going to the NJAA PT website: njaapt.wildapricot.org (top menu, "Events" and "Forum"). It is the team's responsibility to periodically check in or inquire about changes and clarifications to the rules.