

## 2008 Physics Olympics Flying Machines

### Rules

1. The airplane must be powered by a rubber band or contest rubber.
2. There are no size, construction, or material limitations on the plane.
3. No remote control devices are allowed.
4. The competitor's arm is not allowed to move forward during the "launch" of your plane.
5. Only the following modifications are allowed between the two events: changing the "motor", the rudder position, and the wing position.
6. Practice flights are allowed during the mousetrap event, at the beginning of the flying machine event, no practice flights are allowed while you are waiting.
7. If a mechanical problem occurs during the competition, you will be given 3 minutes to try to fix the problem, after that, you will be listed as "Did Not Finish" (DNF).

### Competition

#### Flight Duration

1. Each competitor has the choice of where on the gym floor to release the plane.
2. There can be no forward movement given to the plane from the competitor.
3. Timing will start when the plane leaves the hand of the competitor and will continue if it makes contact with any part of the gym and continues to fly.
4. Timing will stop if the plane becomes stuck in the ceiling, basketball supports, or stops flying.
5. Each team will have two timed flights, the better of the two counting.
6. The plane with the longest flight will receive 1 point, second longest 2 points, etc.

## Accuracy

1. Each competitor will start at one corner of the gym and release the plane toward the center of the gym.
2. Distance from the center of the gym to where your plane touches the floor will be measured, the closest being the winner.
3. Each team will have two flights, the closest counting for the score.
4. The closest plane will receive 1 point, second closest 2 points, etc.

## Scoring

1. The total score will be the sum of the duration points plus the accuracy points.
2. **The lowest total score will be the winner, second lowest second place, etc.**
3. **In case of a tie, the better score in the accuracy phase of the competition will be determining factor.**
4. **In the accuracy competition, if the plane lands out of bounds, it will receive 10 pts.**

## Grades - Duration

- A Must stay aloft for at least 50 seconds.  
(Any plane flying for at least 1 min. will receive 100%)
- B Must stay aloft for at least 40 seconds.
- C Must stay aloft for at least 25 seconds.
- D Must stay aloft for at least 10 seconds
- F Does not fly or is not flyable

Special consideration may be made for the most accurate planes.

**All Grades and decisions are final**