

Mindbenders

Description:

Participants will be challenged to solve a number of scientific and mathematical puzzles.

Number of Participants: 1-2

Approximate Time: 20 - 30 mins.

The Competition:

1. Participants will be given a total of 6 - 10 puzzles to solve.
2. Puzzles may be provided within a single document or placed at different stations.
3. If stations are used each team or participant will be given 3 - 5 minutes to solve the puzzle and answer any other questions given.
4. Each puzzle may require mathematical, scientific, logical or technical reasoning. Some may require a combination of these.

Sample Puzzles:

- A large cube built of 27 smaller cubes is painted red on its entire outer surface. How many of the smaller cubes have 2 painted sides? How many have 3? If each cube is 1 cm x 1cm x 1cm what is the area of one side of the large cube?
- A motorboat is caught in the current and is being pulled towards a waterfall. The boat can travel at 16 km/hr but the current is flowing at 9 km/hr. If the boat's motor uses 5 liters of fuel per hour and there are 16 liters of fuel left can the boat make a safe landing 21 km back upriver? How much more fuel would be needed or would be left over?
- Given the following sequence of numbers: 1, 2, 4, 7, 11, 16, , provide the next 5 numbers in the sequence.



Given four magnets and two dowel rods demonstrate attractive and repulsive forces. What sides of the magnet face each other when they repel? What sides of the magnet face each other when they attract? From your answers above, correctly arrange these molecules.

