1. You have a five-litre jug and a nine-litre jug. Your mother asks you to use these two jugs to measure one litre of orange juice. How would you do it?

Example: "I would first fill the five-litre jug and then pour all the orange juice in the nine-litre jug. This would leave me with four-litre of space in the larger jug. I would refill the five-litre jug and fill up the remaining portion of the nine-litre jug. This way, I would have one-litre orange juice left in the five-litre jug."

2. Your room has three switches. One of these switches is for a fan in the next room. You cannot see whether the fan is on or off unless you come out of the room. What is the minimum number of times you may go in a room to identify the correct switch in another room?

Example: "I would go only once to the other room to find out the accurate switch for the fan. I would turn on the first switch and keep it on for two-three minutes. Next, I would turn off the first switch and turn on the second one. I would run to the other room as soon as I switched on the second switch. If the fan is running, the second switch is for the fan.If the fan is not running, but the blades are rotating slowly, the first switch corresponds to the fan else, the correct switch of the fan is the third one."

Finding amounts

3. A car track has six lanes. You have a task to find the four fastest cars out of 36. How many races would you conduct to find the fastest four cars?

Example: "Conduct six car races with six cars in each group. Then you conduct another race with the winners of the six races. The winner of this race is the fastest car. Next, conduct another race with the remaining fives cars and record the first, second and third cars. They are the second, third and fourth fastest cars out of 36 cars. This way, using eight races, you can find the fastest four cars."

4. Two buses are running towards each other at a speed of 60 km/h and the distance between them is 60 km. A bird is flying from bus one to bus two at a speed of 50 km/h. On reaching bus two, the bird covers the same distance back to bus one. If the bird keeps on doing the same thing until the buses collide, find the distance the bird would cover?

Example: "The speed of both the buses is 60+60 = 120km/hTime the buses would take to collide = distance/speed = 60/120 = 0.5 hours or 30 minutesTotal distance

travelled by the bird = Speed of the bird/time taken by train to collide = 50/0.5 = 100 km."

Number tricks

These puzzles require you to use your critical thinking and analytical abilities to solve problems involving numbers. Interviewers may ask this question to see how you reason with numbers and find patterns in numbers. Here are two examples:

5. Your father gives you a stack of ten marbles and each of the marble weighs 20 grams. One stack is faulty and each marble in this stack weighs only 15 grams. What is the least number of times you would weigh to find the faulty marble?

Example: "The least number of times you weigh your stack of marble is only once. Line up your marble stacks and pick up one marble from the first stack, two marbles from the second, three marbles from the third and so on. You would have 55 marbles. If all the marbles weigh 20 grams each, the ideal weight of your stack would be 55x20 = 1,100 grams. If the total is 1,095 grams, your first marble stack is faulty but if it is 1,090 grams, your second stack is faulty and so on."

6. A tortoise currently at the bottom of a 65-meter hill is trying to climb it. Every hour, the tortoise climbs five meters and slips down three meters. How long would it take for the tortoise to reach the top of the hill?

Example: "In one hour, the net climb rate of the tortoise is 5-3 = 2 meters. So, it would take 30 hours to reach the 60-meter mark on the hill. On the 31st hour, it climbs up five meters and gets to the top of the hill before it slips down by 3 meters."