Ask a friend to pick a number from 1 through 1,000. After asking him ten questions that can be answered yes or no, you tell him the number.

What kind of Questions?

Solution:

The key to the solution is that 2 to the tenth power is 1,024 (that is, over 1,000). With each questions you knock out half the remaining numbers, and after ten questions only the "thought" number is left.

Say the number is 860. The ten questions are:

1. "Is your number greater than 500?" "Yes." Add 250.

2. "Greater than 750?" "Yes." Add 125.

3. "Greater than 875?" "No." Subtract (not 62.5 but the nearest even number) 62.

4. "Greater than 813?" "Yes." Add 31.

5. "Greater than 844?" "Yes."Add (not 15.5 but) 16.

6. "Greater than 860?" "No." Subtract 8.

7. "Greater than 852?" "Yes." Add 4.

8. "Greater than 856?" "Yes." Add 2.

9. "Greater than 858?" "Yes." Add 1.

10. "Greater than 859?" "Yes."

The number is 860.