1. (30 pts) Define a recursive function that takes two double parameters and returns the power result.

```cpp
double recursivePower(double a, double b); // returns a^b in a recursive way.
```

2. (20 pts) One can compute the value of PI using the following series:

\[
\pi = 4 \times \left( 1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \frac{1}{9} - \frac{1}{11} + \frac{1}{13} - \ldots \right)
\]

Write a program to compute the approximate value of PI using the above series including terms up to 1/99.
3. **(30 pts)** Some four digit numbers have the following property: The square of the sum of the first two digits and the last two digits of the given number is equal to the given number (i.e., given number = 3025 \(\Rightarrow (30 + 25)^2 = 3025\)).

Define a function that accepts a four digit positive integer and returns 1 if it has the above property, 0 otherwise.

```cpp
int hasProperty(int n); // returns 1 if n has the property, 0 otherwise.
```

4. **(30 pts)** Write a program that reads 10 positive integers between 1 and 9 from the keyboard, and prints the frequency of those given numbers.

**Hint:** You may use two arrays; one for storing the given numbers, and the other for storing the frequencies.