Start the program → Input first number (Base from 2 – 9) → Calculate new value = (first number ^ 4) - 1 → Display new value → Input second number (number <= new value) → Divide second number by first number → Are (up to) four numbers calculated?

No (red loop back to Divide second number by first number)

Yes → Take the remainder of the second number divided by the first number → Are (up to) four remainders calculated?

No (green loop back to Take the remainder of the second number divided by the first number)

Yes → Return the second number converted in the base of the first number

In the case of the red arrow and outline. This represents the function, base_divisor. It ends once the second number cannot be divided into an integer more than or equal to one anymore.

In the case of the green arrow and outline. This represents the function, base_remainder. It ends once the final quotient is produced from the second number being divided by the first. It takes the remainder of this last quotient.

The blue arrows are for the function, base_conversion. They show the path the program takes to convert one number into it equivalence in another base.