Title

Resistor colour codes

Problem Description

One of the more common problems you'll face in your circuits course is to decode resistor colour bands. There are a ton of calculators on the Internet, but it's always fun to make your own.

A typical resistor has 3 colour bands. They are read as follows:

$(band1*10 + band2)*10^{band\ 3}$

You may find a colour code chart here to understand which numbers the bands represent: https://en.wikipedia.org/wiki/Electronic_color_code

For example, a resistor with a brown-black-orange colour band marking would be:

$(1 * 10 + 0)*10^3$ = 10 kilohms, since brown represents the number 1, black 0, and orange 3.

Write a program that prompts the user to enter either a set of three colours or a resistance. The calculator must compute either the resistance (if the user enters colours) or the colours (if the user enters resistance).

Testing

If the user enters 10000, the program should output brown-black-orange. If the user enters brown-black-orange, the program should output 10000.

Time Target

Note: this problem requires a lot of typing of more or less similar lines of code. The time targets below do not account for the time spent typing, but for the time spent **designing** the code. Thus, a 3 star programmer would be able to determine exactly what needs to be done in under 5 minutes, but make take 10 minutes or more to write the code.

***	less than 5 minutes
**	5-10 minutes
*	greater than 10 minutes

Section

If statements