**Connections:   
Crack the Code!**

**Master 6**

Computers talk using only two numbers: 0 and 1.   
This is called **Binary Code**.

Think of a bunch of light switches being turned on and off.   
We use 1 to show “On.”   
We use 0 to show “Off.”

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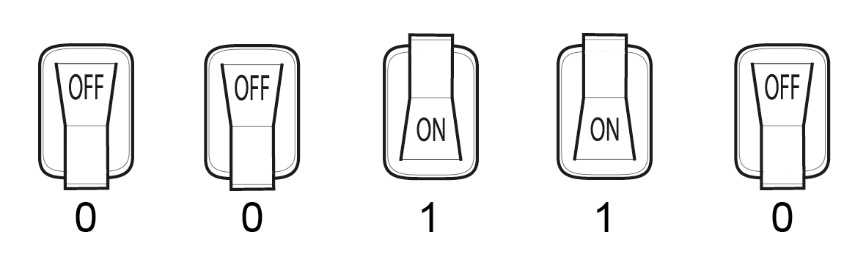
**2**

**16**

**8**

**4**

**1**



Number 6

The switches for 4 and 2 are “On.”   
So, 00110 represents the number 4 + 2, or 6.

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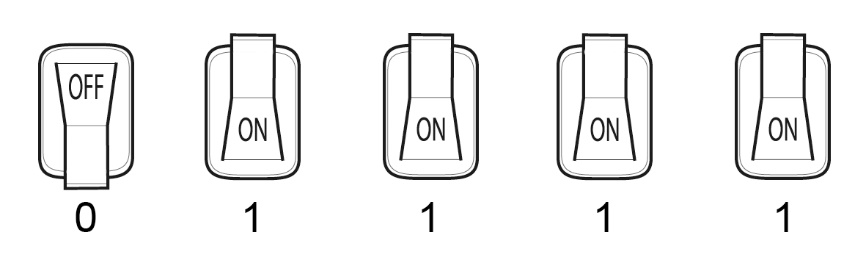
**1**

**2**

**16**

**8**

**4**



Number 15

The switches for 8, 4, 2, and 1 are “On.”  
So, 01111 represents the number 8 + 4 + 2 + 1, or 15.

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Crack the Code to find these numbers:  
  
a) 1 1 1 1 1 b) 1 0 0 0 1 c) 0 1 1 1 0

Use Binary Code to show 8, 9, and 10.