



Message from Pluto

Enter your team's answers on this sheet. See the "Message from Pluto" packet for instructions and explanation.

What is the value in decimal notation of the binary number 11010011b?

211

Express 37 as a binary number eight bits wide.

0100101b

What numbers (in decimal notation) represent the letters in the word *MATH*?

13, 1, 20, 8

What is the narrowest bit-width that will suffice to represent the 26 letters, including the use of 0 to represent a space?

5 bits

Using the representation that a space is 0, *A* is 1, *B* is 2, ..., *Z* is 26, represent the word *MATH* in little-endian binary, using the bit width you just solved for. Write the bits for *M* left to right, immediately followed by the bits for *A*, etc.

<10110 10000 00101 00010>

Assuming these messages are encoded with a final parity bit, which ones indicate a transmission error and which ones don't? Check a box for each.

Message	Error	No error
<10110>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<01001>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<0010101>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<101101>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

What are the four data bits for the incorrect message <1001000>?

<0100>

What is the message from Pluto?

JUDGE ME BY MY SIZE DO YOU

