Variables Worksheet

What is a variable?
They stand for a value that can be changed. Think of variables as containers. They hold values that can range from numbers to words to objects and can be changed anytime.

Example 1
\( x = 4 \)
- In this statement \( x \) is the variable.
- The number stored in \( x \) is 4.

Example 2
\( x = 4; \)
\( x = 5; \)
\( x = x + 4; \)
Now what is the value of \( x \)?
- Although we originally set the value of \( x \) to be 4, in the next line we change the value of \( x \) to 5.
- In the last statement we set \( x \) to equal \( x + 4 \), so \( 5 + 4 \)
  \( x = 9 \)

When we made the Scratch program What’s your Name? many students named the variable after their actual name. Why is this bad?
Think back to the definition of a variable. They are containers, so their value may change. Originally we could have:
Amanda=Amanda (Maybe this makes sense)
but along comes another user named Mary, then we change the value of the variable to Mary
Amanda=Mary (This does not make sense)
What would be a better variable name? ________________
So while the contents in a variable may change, the name of the variable does not.