***Variables – The “Anythings”***

We can use variables to represent **ANYTHING** we want. In computers we use variables to store information, so today we are going to start with non-mathy variables…

***Mad libs***

We can use “variables” in English to produce different results. Here is a sentence:

**Wow, that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ smells really good!**

Now fill in the following chart with words that would result in factual sentences, nonsensical sentences, and really funny sentences.

|  |  |  |
| --- | --- | --- |
| Factual | Nonsensical | Funny |
|  |  |  |

Just like in science we have **independent** and **dependent variables**.

Vocabulary!

**Independent Variable**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Dependent Variable**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Rather than using a space in math, we use **a letter**. Let’s try a mad lib again.

**It is important that you wear a/an** *X* **before you jump into a pool!**

|  |  |  |
| --- | --- | --- |
| Factual | Nonsensical | Funny |
|  |  |  |

In math we use variables in the same way. They can be ***any number*** just like a variable in a mad lib can be ***any word***. So let’s try some math mad-libs…

Here are some number sentences…

|  |
| --- |
| $$x+3$$ |
| Odd | Even |
|  |  |

|  |
| --- |
| $$3x$$ |
| Odd | Even |
|  |  |

Depending on the independent variable we choose, we get different results…

Here is another number sentence:

And another….

$$2x+1$$

|  |  |
| --- | --- |
| Odd | Even |
|  |  |

We can even find other **properties** besides just odd and even.

Try this out…

|  |
| --- |
| $$4x+1>5$$ |
|  True | False |
|  |  |

|  |
| --- |
| $$2x+11=7$$ |
| True | False |
|  |  |