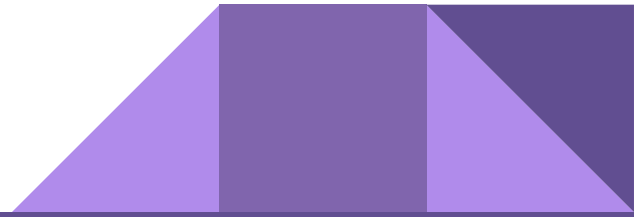
Logical Operators

Combining Booleans

Sometimes we need to make a Boolean variable that takes multiple pieces of information into consideration.

Let's say we want to create the variable `nice_day`. What pieces of information need to be `True` in order for it to be a nice day?

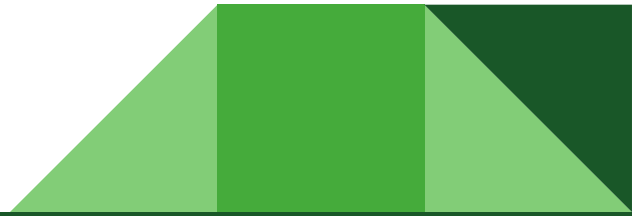


Logical Operators

There are 3 logical operators: `and`, `or`, and `not`.

`and` and `or` are *binary operators*, where `not` is a *unary operator*.

We use these 3 operators when we want to combine multiple Boolean values into a single Boolean value!



How do they work?

`and` will evaluate to `True` when **both** Booleans around it are `True`.

`or` will evaluate to `True` when **either** *(or both)* of the Booleans around it is `True` .

`not` will evaluate to `True` when its Boolean is False, and False when its Boolean is `True` (it flips the sign).

Truth Tables

x	y	x and y	x or y	not x
True	True			
True	False			
False	True			
False	False			

Truth Tables

x	y	x and y	x or y	not x
True	True	True		
True	False	False		
False	True	False		
False	False	False		

Truth Tables

x	y	x and y	x or y	not x
True	True	True	True	
True	False	False	True	
False	True	False	True	
False	False	False	False	

Truth Tables

x	y	x and y	x or y	not x
True	True	True	True	False
True	False	False	True	False
False	True	False	True	True
False	False	False	False	True