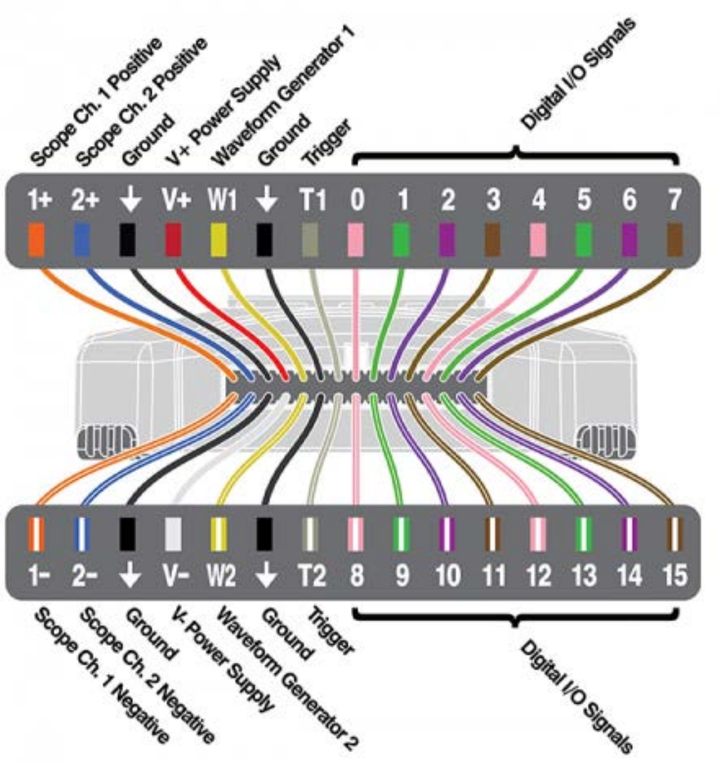
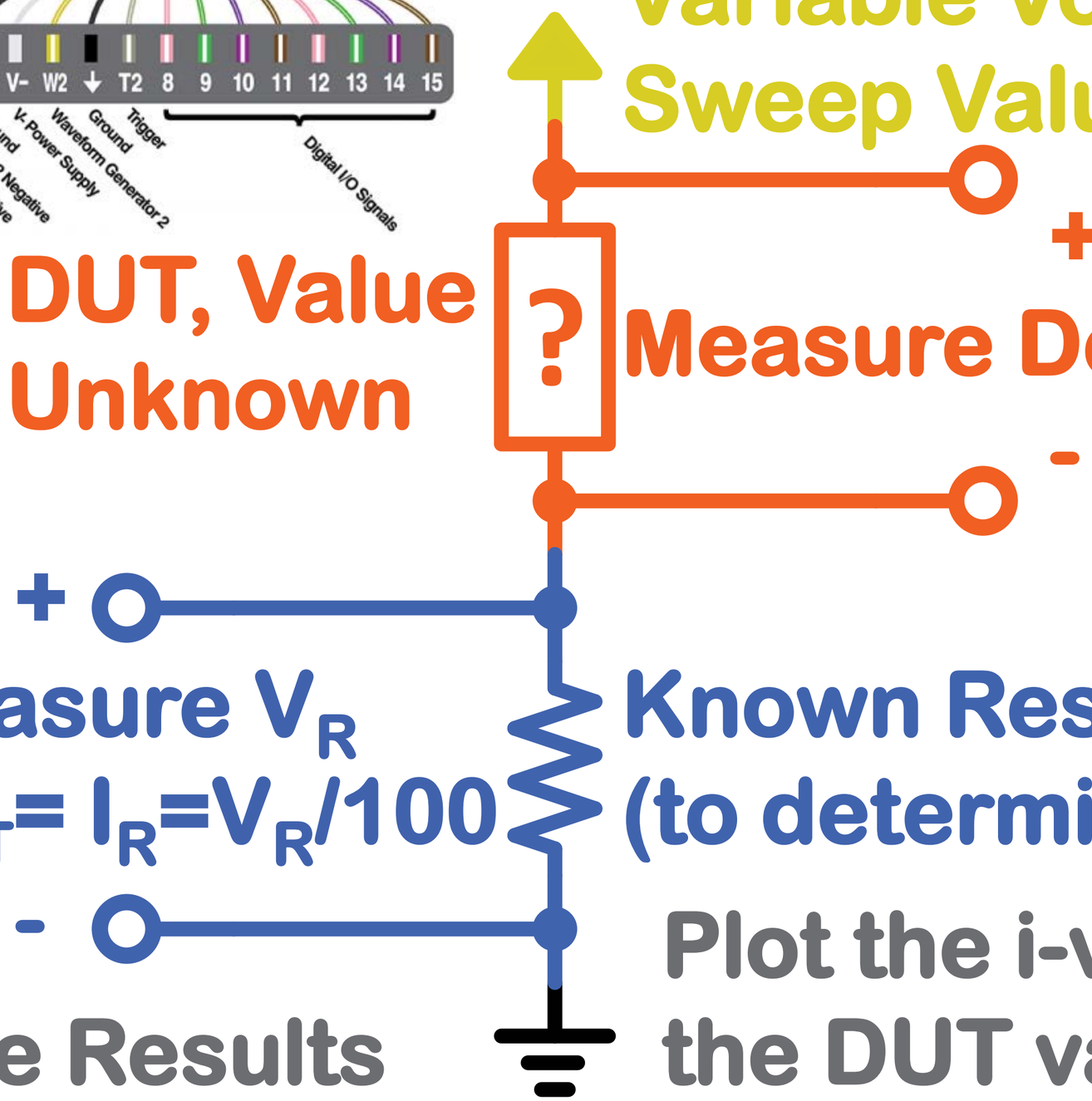
Determine the i-v relationship of an unknown device.

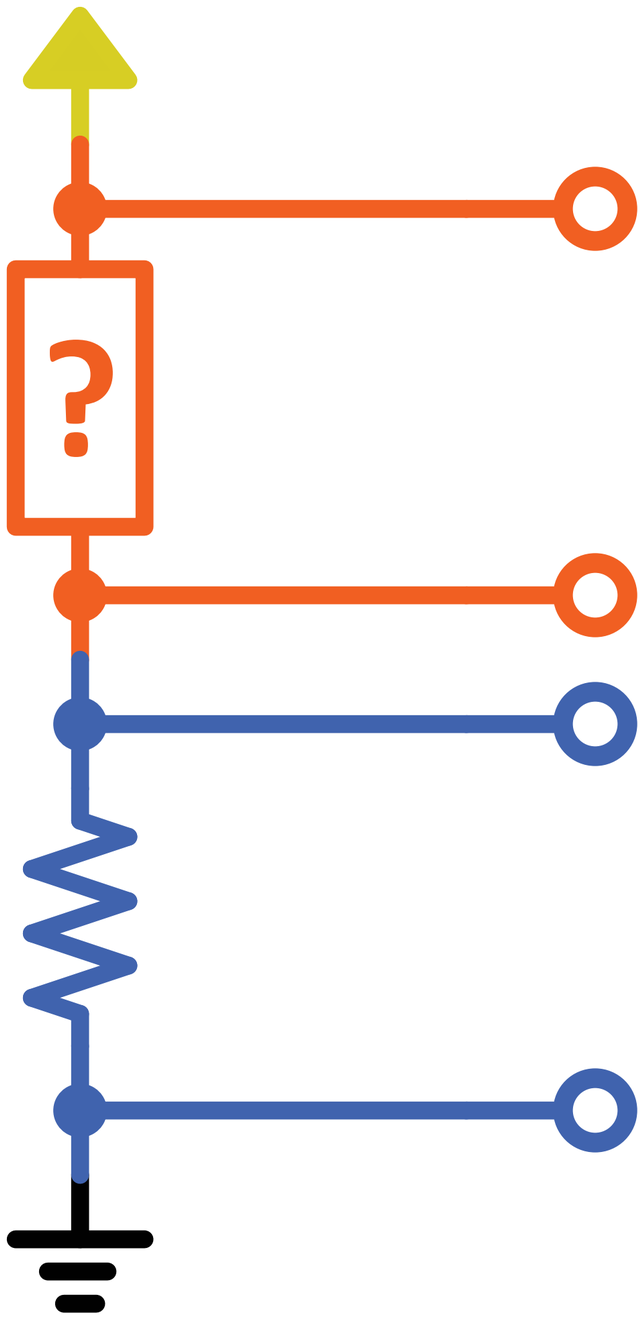


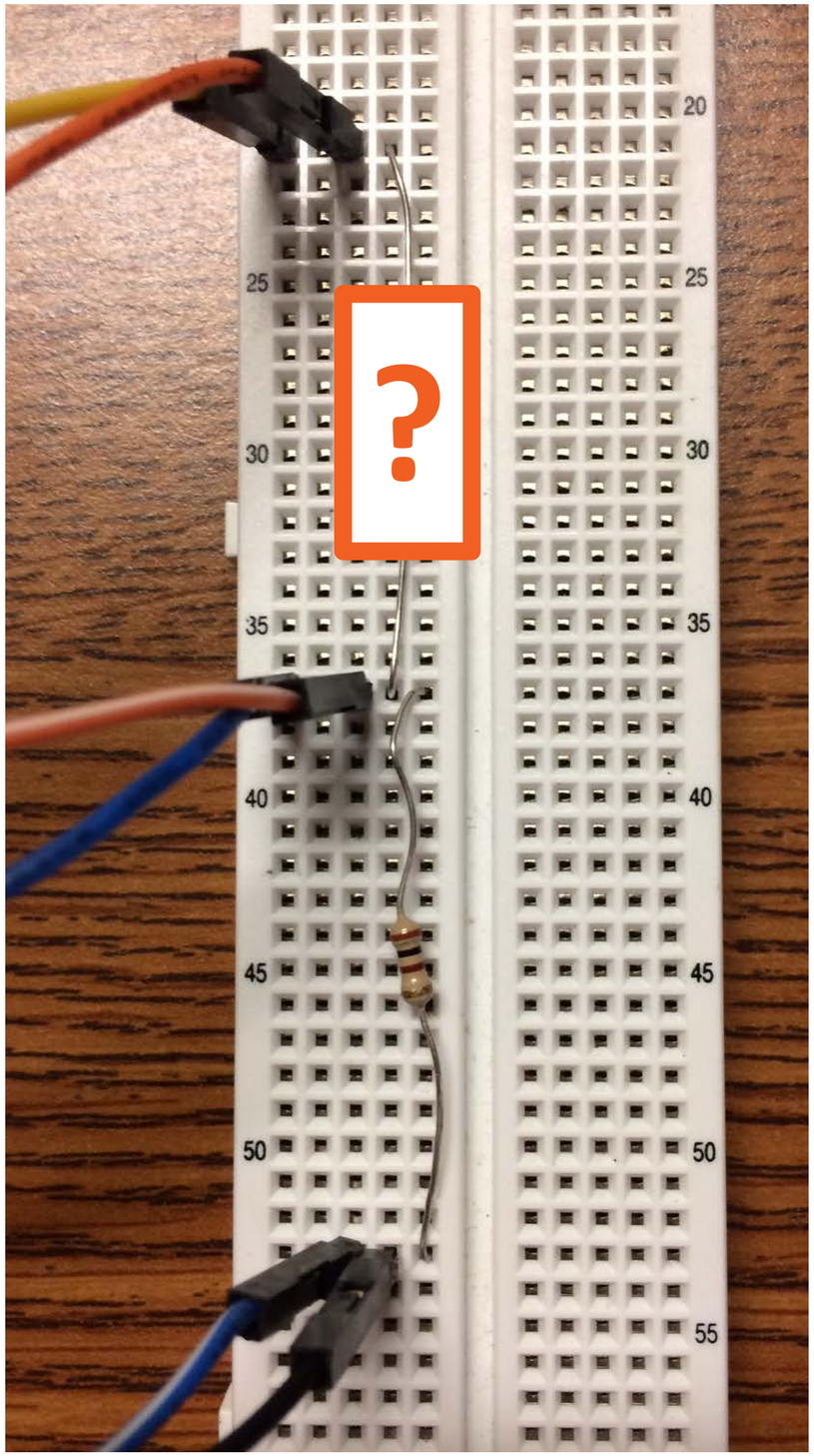


Save Results to an Excel File.

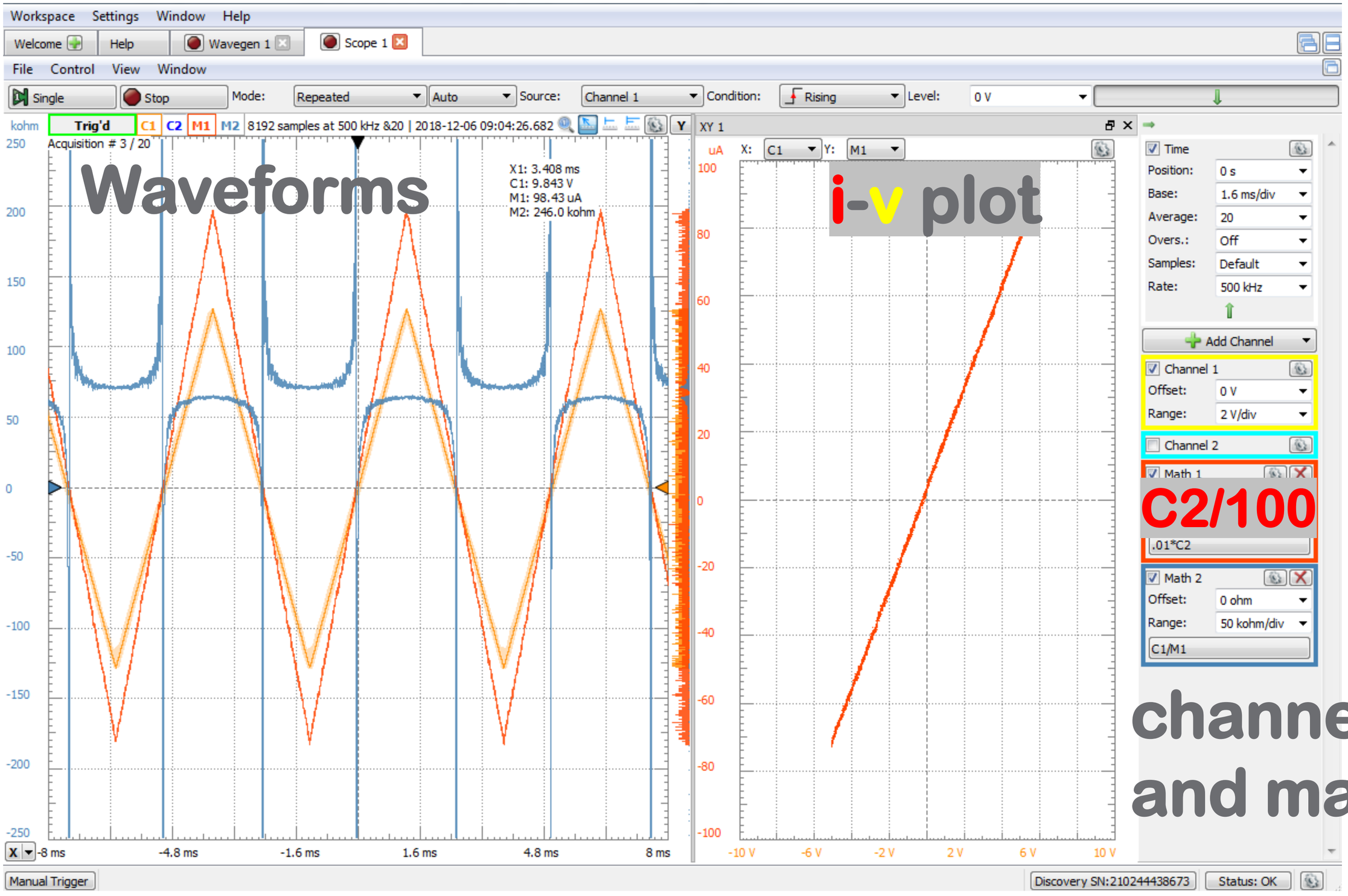
Plot the i-v curve. Determine the DUT value. How does it compare to the actual value?

Example: Set up





Example: $i_R(v_R)$=?



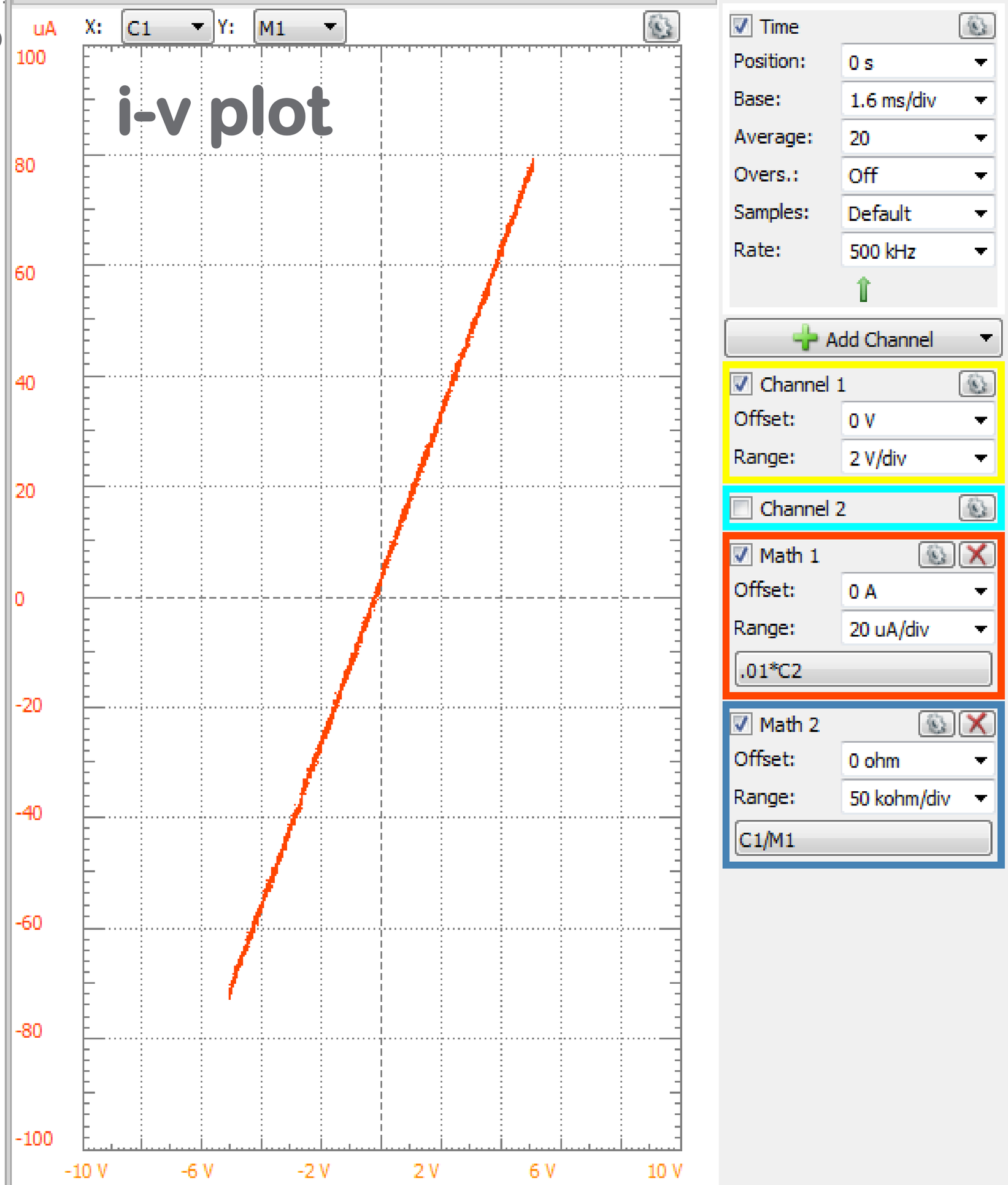
channels and math

What is this?

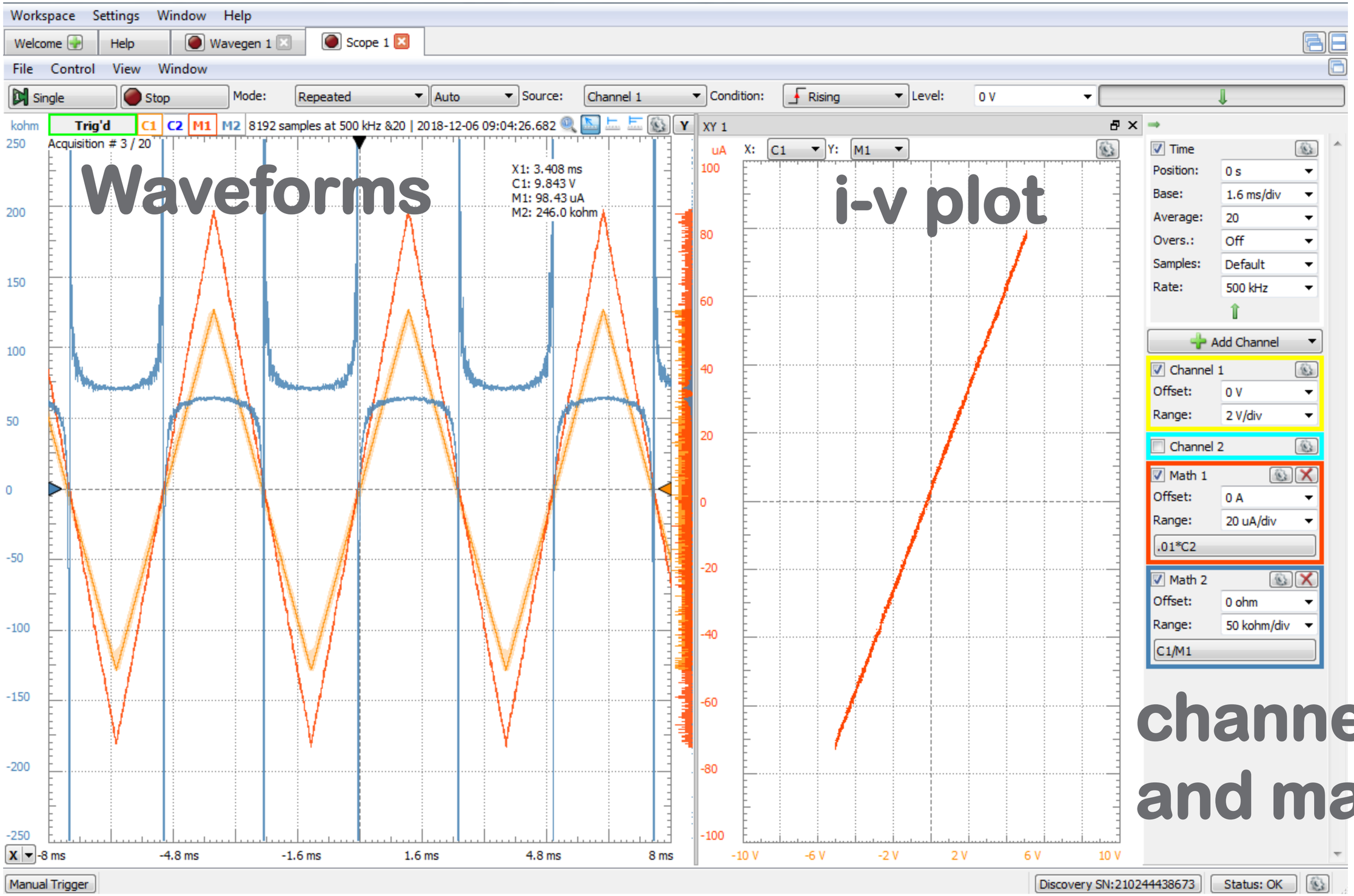
Example: $i_R(v_R)$=?

What is this?

~A straight line through the 0,0.



Resistor Example: $i_R = v_R/R$

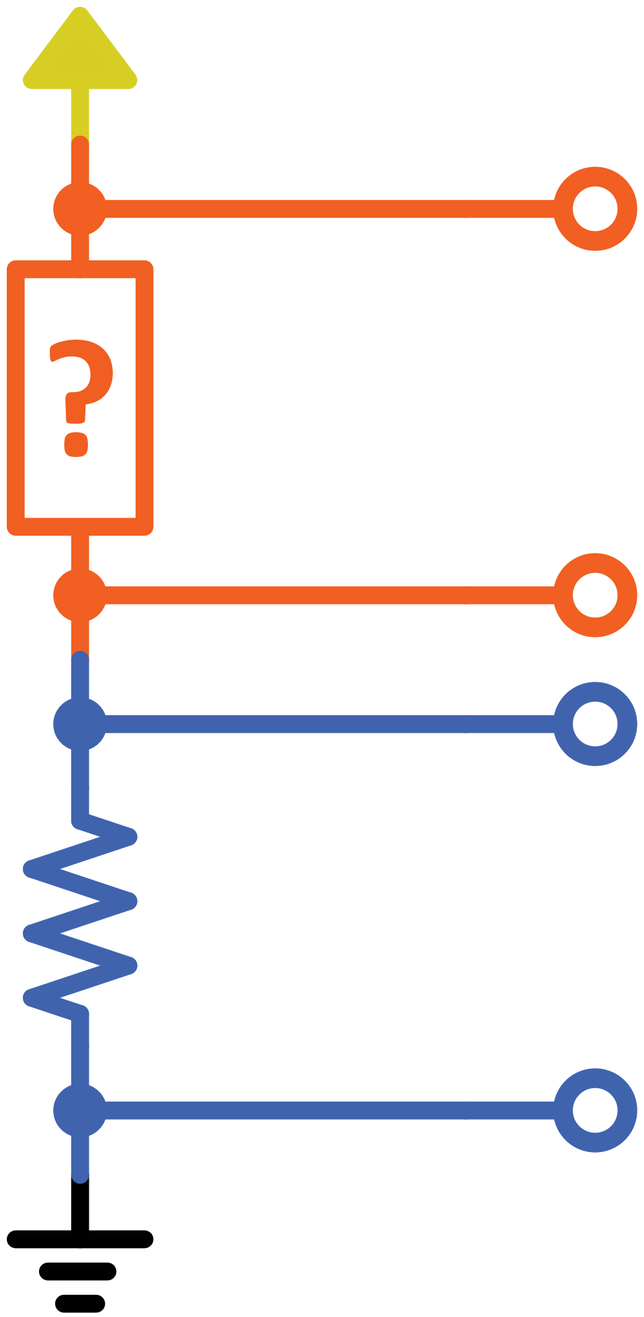


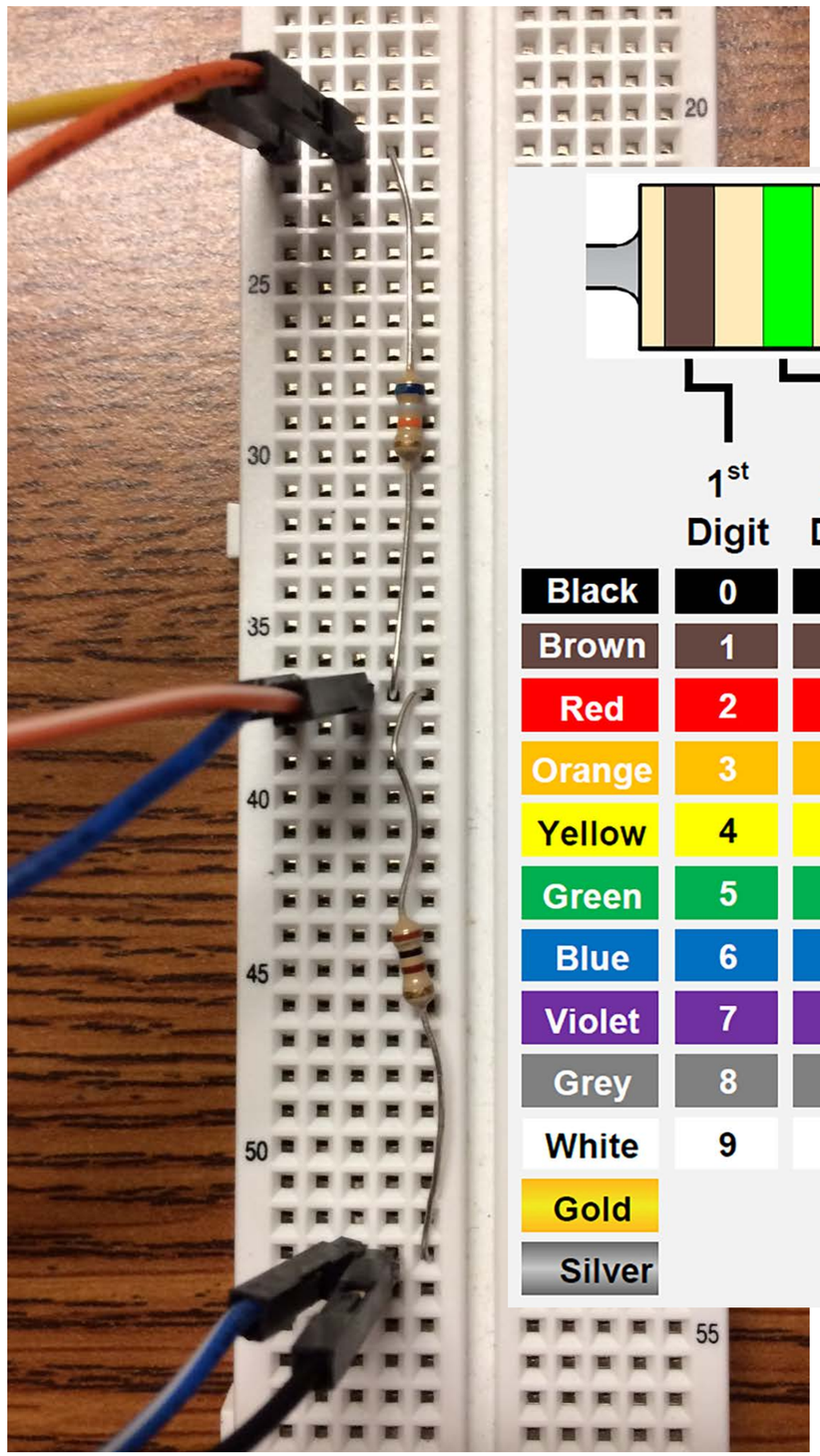
channels and math

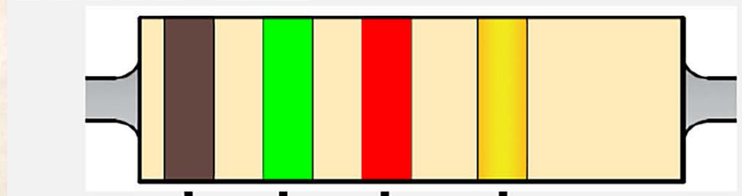
$R = v_R/i_R = 1/(\text{i-v slope}) = 100*(\Delta C1)/(\Delta C2)$

Resistance = 10V/.00015A = 67 kΩ

Resistor Example: Set up







	1st Digit	2nd Digit	Multiplier	Tolerance
Black	0	0	x 1	
Brown	1	1	x10	±1%
Red	2	2	$x10^2$	±2%
Orange	3	3	$x10^3$	±3%
Yellow	4	4	$x10^4$	±4%
Green	5	5	$x10^5$	±0.5%
Blue	6	6	$x10^6$	±0.25%
Violet	7	7	$x10^7$	±0.1%
Grey	8	8	$x10^8$	±0.05%
White	9	9	$x10^9$	
Gold			$x10^{-1}$	±5%
Silver			$x10^{-2}$	±10%

Resistance = 68 kΩ