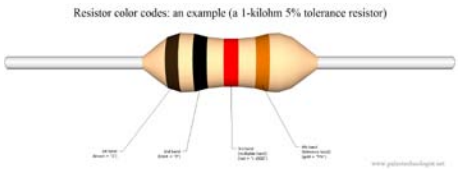
Automotive Technology

Resistor Calculations Table

Name _____ **Date** _____ **Period** _____

0 = Black
1 = Brown
2 = Red
3 = Orange
4 = Yellow
5 = Green
6 = Blue
7 = Violet
8 = Grey
9 = White

Tolerance
Gold = ± 5%
Silver = ± 10%
None = ± 20%



**** Example - Question 2***

A resistor has the following color bands:

Brown-Grey-Red-Gold

Brown=1	Grey = 8	Red =2	Gold= ± 5%
1st Digit	2nd Digit	# 0's -	Tolerance
1	8	00	± 5% Ω

1800 Ohms x 5% = 90 Ohms (Variance)
1800 – 90 = 1710 and 1800 + 90 = 1890
So the resistor should measure between
1710 ohms (low) - 1890 ohms (high)

(USE BACK OF THIS SHEET FOR MATH CALCULATIONS)

	1st Band	2nd Band	3rd Band #0s	4th Band	Ohms Value	Tolerance	Low Tolerance	High Tolerance
1.	Brown	Red	Brown	Silver	120	12	108	132
****2.***	***Brown***	***Grey***	***Red***	***Gold***	*See Example Below*			
3.	Violet	Black	Red	Silver				
4.	Blue	Green	Brown	Silver				
5.	Green	Red	Brown	Silver				
6.	Orange	Black	Green	Silver				
7.	Yellow	Blue	Red	Silver				
8.	Red	Red	Red	Silver				
9.	Brown	Red	Black	Silver				
10.	Yellow	Brown	Red	Silver				
11.	Red	Red	Brown	Gold				
12.	Violet	Yellow	Red	Gold				
13.	Orange	Blue	Brown	Gold				
14.	Brown	Orange	Red	Gold				
15.	Orange	Blue	Black	Gold				
16.	Green	Red	Brown	Gold				
17.	Orange	Black	Orange	Gold				
18.	Red	Red	Brown	Silver				
19.	Violet	Yellow	Red	Silver				
20.	Brown	Blue	Orange	Silver				