

Math 090 Activity
P-value and Significance Level
Conversions and Comparison

1. P-values and significance levels are sometimes written as a decimal proportion. The key is being able to determine if the P-value is lower or higher than the significance level. Fill out the following table.

P-value	Significance Level	Is the P-value lower or higher than the significance level
0.0271	0.05	
0.337	0.1	
0.0077	0.01	
0.068	0.05	
0.593	0.1	
0.099	0.01	
0.044	0.05	
0.0889	0.1	
0.0007	0.01	

2. Now convert the P-value and Significance Levels into percentage first. Then determine if the P-value is lower or higher than the significance level.

P-value	P-value %	Sig Level	Sig Level %	Is the P-value lower or higher than the significance level
0.0271		0.05		
0.337		0.1		
0.0077		0.01		
0.068		0.05		
0.593		0.1		
0.099		0.01		
0.044		0.05		
0.0889		0.1		
0.0007		0.01		

3. P-values are sometimes written in scientific notation. Convert the following P-values into decimal proportion and then a percentage. Is the P-value lower or higher than the significance level?

P-value Scientific Notation	P-value Proportion	P-value %	Sig Level %	Is the P-value lower or higher than the significance level
3.7×10^{-4}			5%	
8.21×10^{-6}			10%	
2.9×10^{-2}			1%	
5.51×10^{-3}			5%	
6.8×10^{-1}			10%	
5.9×10^{-5}			1%	
2.8×10^{-3}			5%	
1.44×10^{-6}			10%	
5.33×10^{-2}			1%	