

	Question	IV TIME	DV
1 0.02	Do pillbugs prefer wet or dry soil?	Wet (5.24) and dry (4.76) soil Moisture	# of pillbugs in each chamber
2 1.004	Do pillbugs prefer being in the dark or in the light?	Dark (3.43) and light (6.57) Light Exposure	# of pillbugs in each chamber
3 0.28	Do pillbugs prefer watermelon or tomato?	Watermelon (4.17) or tomato (5.83) Fruit Type	# of pillbugs in each chamber
4 4.42	Do pillbugs prefer dirt or no dirt?	Dirt (8.33) and no dirt (1.67) Presence of Dirt	# of pillbugs in each chamber
5 0.02	Do pillbugs prefer wet dirt or dry dirt?	Dry dirt (4.77) and wet dirt (5.23) Humidity/Moisture	# of pillbugs in each chamber
6 1.48	Do pillbugs prefer peaches or apples?	Peaches (3.07) and apples (6.93) Fruit Type	# of pillbugs in each chamber
7 1.52	Do pillbugs prefer apples or strawberries	Apples (6.95) and strawberries (3.05) Fruit Type	# of pillbugs in each chamber

What does your X^2 value mean?

- Experimental Hypothesis:
 - If given a choice between _____ **or** _____, **then** there will be a **higher number of pillbugs** in the chamber with ____ (your prediction) ____.
 - Pillbugs prefer ____ (your prediction) ____.
- Null Hypothesis:
 - There is *no significant difference* between O and E.
 - Any difference between O and E are due to *random chance*.
 - Pillbugs have NO preference for _____ **or** _____.

What does your X^2 value mean?

The chi-squared value (X^2) of $\underline{\hspace{1cm}}_{(X^2)}$ is **less than/greater than** the critical value of $\underline{\hspace{1cm}}_{(CV)}$ at $p=0.05$ with $\underline{\hspace{1cm}}$ degree of freedom.

Therefore, the null hypothesis is **accepted/rejected**.

What this means:

If you accepted your null hypothesis:

- You are 95% certain that there is NO significant difference between O & E. / Pillbugs have NO preference.

If you rejected your null hypothesis:

- You are 95% certain that there IS a significant difference between O & E. / Pillbugs prefer _____.