Essential Math for Data Analysis Using Excel Online

Module 4, Lab 2: Incident Resolution Index

Learning Objectives

- Calculate the incident resolution index.

Description

Learners will be given a small data set with a list of incident IDs and a categorical variable indicating whether the incident was resolved adequately during the SLA. Learners will calculate the proportion of incidents resolved.

Data set

Mod4Lab2.csv

Overview

In this lab, we'll calculate the proportion of incidents resolved. To do that, we'll need to convert a categorical variable into something numerical.

What You'll Need

To complete the lab, you will need the online version of Microsoft Excel.

Exercise 1: Find the Proportion of Resolved Incidents

1. Open the data set in Excel. Here's what the data look like:

	A	B
1	ticket.numbe	resolved.in.sla
2	913	Yes
3	987	Yes
4	803	Yes
5	678	Yes
6	377	Yes
7	134	Yes
8	677	Yes
9	747	Yes
10	212	Yes
11	933	Yes
12	848	Yes
13	619	Yes
14	305	Yes
15	606	Yes
16	245	No
17	621	Yes
18	514	No
19	114	No
20	188	Yes
21	505	No
22	167	No
23	160	Yes
24	457	Yes
25	525	Yes
26	475	No
27	146	Yes
28	424	No
29	745	Yes
30	954	Yes
31	933	Yes

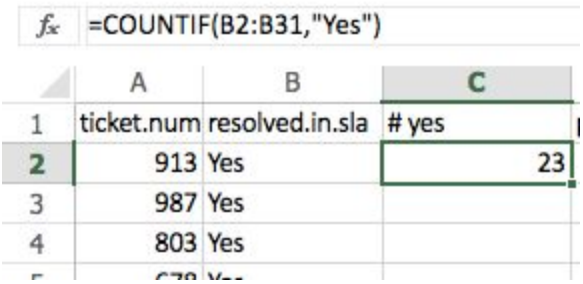
The “yes” and “no” values in column B tell us whether each incident was resolved or not.

2. Find the proportion of incidents resolved. In other words, find the ratio of “yes” answers to the total number of cases. Thankfully, Excel can count the yes values for us. Create three new columns: one for the number of yes values, one for the total number of incidents, and one for the proportion.

	A	B	C	D	E
1	ticket.num	resolved.in.sla	# yes	# total	proportion yes
2	913	Yes			
3	987	Yes			
4	803	Yes			

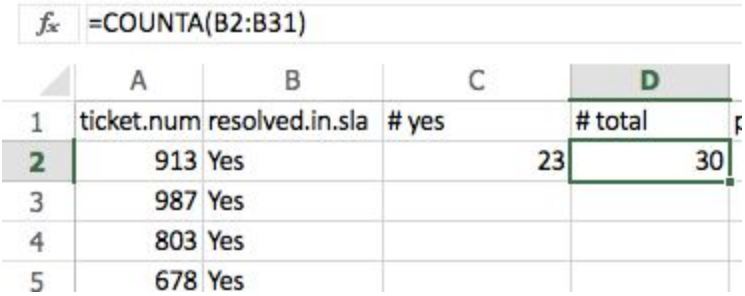
3. In column C, use the COUNTIF function to find the number of incidents categorized as “yes.” The syntax is **=COUNTIF(range of cells, criteria)**. Use a colon to indicate the range of cells as B2:B31.

Since the criteria you want involves text instead of numerical entries, make sure you put “Yes” in quotation marks.



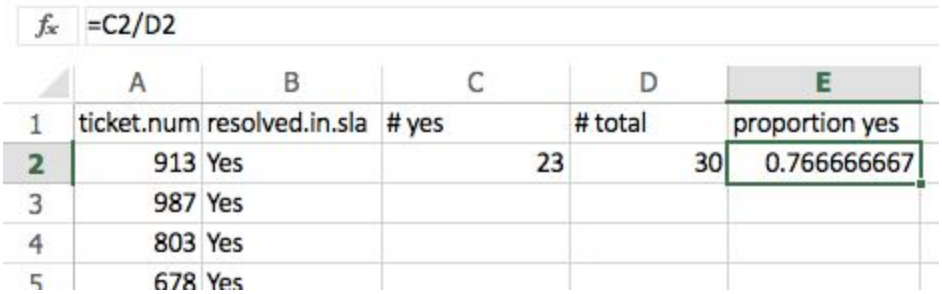
It counted up 23 yes answers.

4. You can probably tell by eyeballing the spreadsheet how many total incidents there are, but there’s also a function you can use to have Excel do the counting for you. In column D, use the COUNTA function, which counts the number of cells in a particular range that aren’t empty. The syntax is **=COUNTA(first cell:last cell)**. You’re counting from B2 to B31.

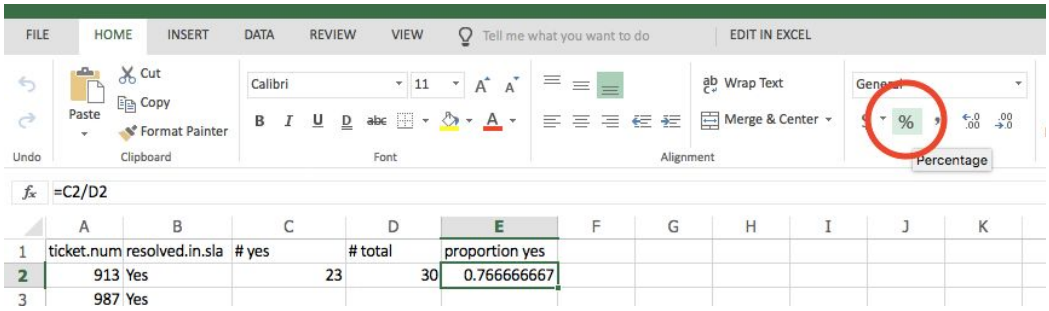


There we go. There were 30 total incidents.

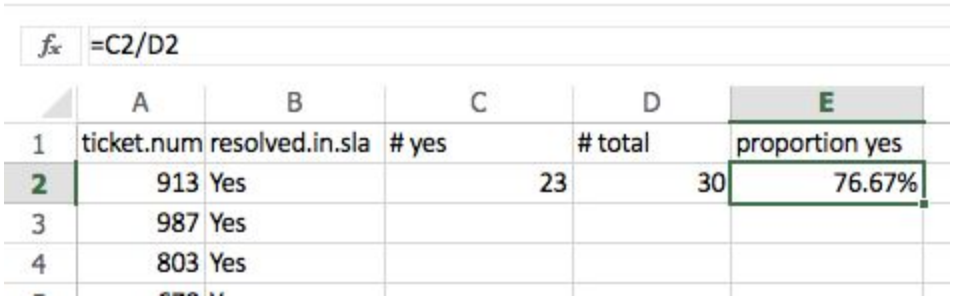
5. Now find the proportion of yes answers to total answers. No fancy functions necessary here: Just divide the number of yes answers by the total number of entries. That’s C2 divided by D2.



6. Excel automatically formats this as a decimal, but you’d probably want this expressed as a percentage in the real world. Click on the decimal in cell E2, then go to the Home tab and click the Percentage icon (%) under Number.



That'll convert the decimal into a percentage.



There we go. It looks like 76.67% of the incidents were resolved.