



How to Calculate Days between Two Dates and Average Time to Arrest

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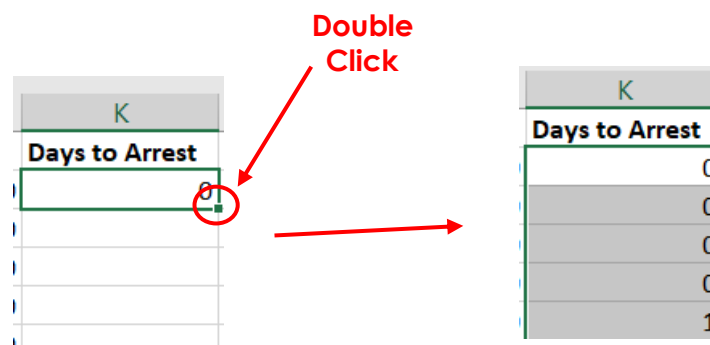
This guide will walk you through calculating the number of days between the day a crime was reported to the day an arrest was made. This same process can be used to calculate a number of different interests as long as you have two separate dates. We will then calculate the average number of days to arrest for each crime type. This guide should optimally be used after the How to Guide for pivot tables. The dataset for this guide is from data.gov, an open source data portal. We are looking at January-June 2020 crime for the city of Austin, Texas that resulted in arrest.

1. You will need to open your data in excel. We are interested in the number of days between the date the crime was reported and the date an arrest was made. We are going to create a new column for "**Days to Arrest**" and use the function "**DATEDIF=(date1, date2, "d")**". After you enter the function, double click the new day cell and the rest of the column will populate.

H	I	J	K
Highest Offense Description	Report Date	Clearance Date	Location Type
ASSAULT W/INJURY-FAM/DATE VIOL	6/6/2020	6/6/2020	RESIDENCE / HOME
ASSAULT W/INJURY-FAM/DATE VIOL	6/6/2020	6/6/2020	HOTEL / MOTEL / ETC.
ASSAULT W/INJURY-FAM/DATE VIOL	6/6/2020	6/6/2020	RESIDENCE / HOME
TERRORISTIC THREAT-FAM/DAT VIO	6/6/2020	6/6/2020	RESIDENCE / HOME
ASSAULT W/INJURY-FAM/DATE VIOL	6/5/2020	6/6/2020	RESIDENCE / HOME
AGG ASSAULT FAM/DATE VIOLENCE	6/6/2020	6/6/2020	RESIDENCE / HOME

I	J	K
Report Date	Clearance Date	Days to Arrest
6/6/2020	6/6/2020	
6/6/2020	6/6/2020	
6/6/2020	6/6/2020	
6/6/2020	6/6/2020	
6/5/2020	6/6/2020	

=DATEDIF(I2,J2,"d")			
I	J	K	
Report Date	Clearance Date	Days to Arrest	Loc
6/6/20	6/6/20	=DATEDIF(I2,J2,"d")	



2. Now that we have our days between crime reported and arrest made, we will create a pivot table with our data for offenses and days to arrest. Go to insert, click pivot table. Our first step is to move our "Days to Arrest" to the **Value** field, and the offenses to **Rows**. Our pivot table will populate. Our values on the right are a count but we want an average so we will go back to the value field and click the arrow by "Days to Arrest". Click **Value Field Settings** and Summarize Value Field by "**Average**". This will give us average days to arrest for each crime type.

Row Labels	Count of Days to Arrest
4 ABUSE OF 911	1
5 AGG ASLT ENHANC STRANGL/SUFFOC	19
6 AGG ASLT STRANGLE/SUFFOCATE	94
7 AGG ASLT W/MOTOR VEH FAM/DAT V	1
8 AGG ASSAULT	59
9 AGG ASSAULT FAM/DATE VIOLENCE	52
10 AGG ASSAULT ON PEACE OFFICER	1
11 AGG ASSAULT WITH MOTOR VEH	2
12 AGG FORCED SODOMY OF CHILD	1
13 AGG ROBBERY/DEADLY WEAPON	18
14 AGG SEXUAL ASSAULT CHILD/OBJEC	2

Value Field Settings

Source Name: Days to Arrest

Custom Name: Average of Days to Arrest

Summarize Values By: Show Values As

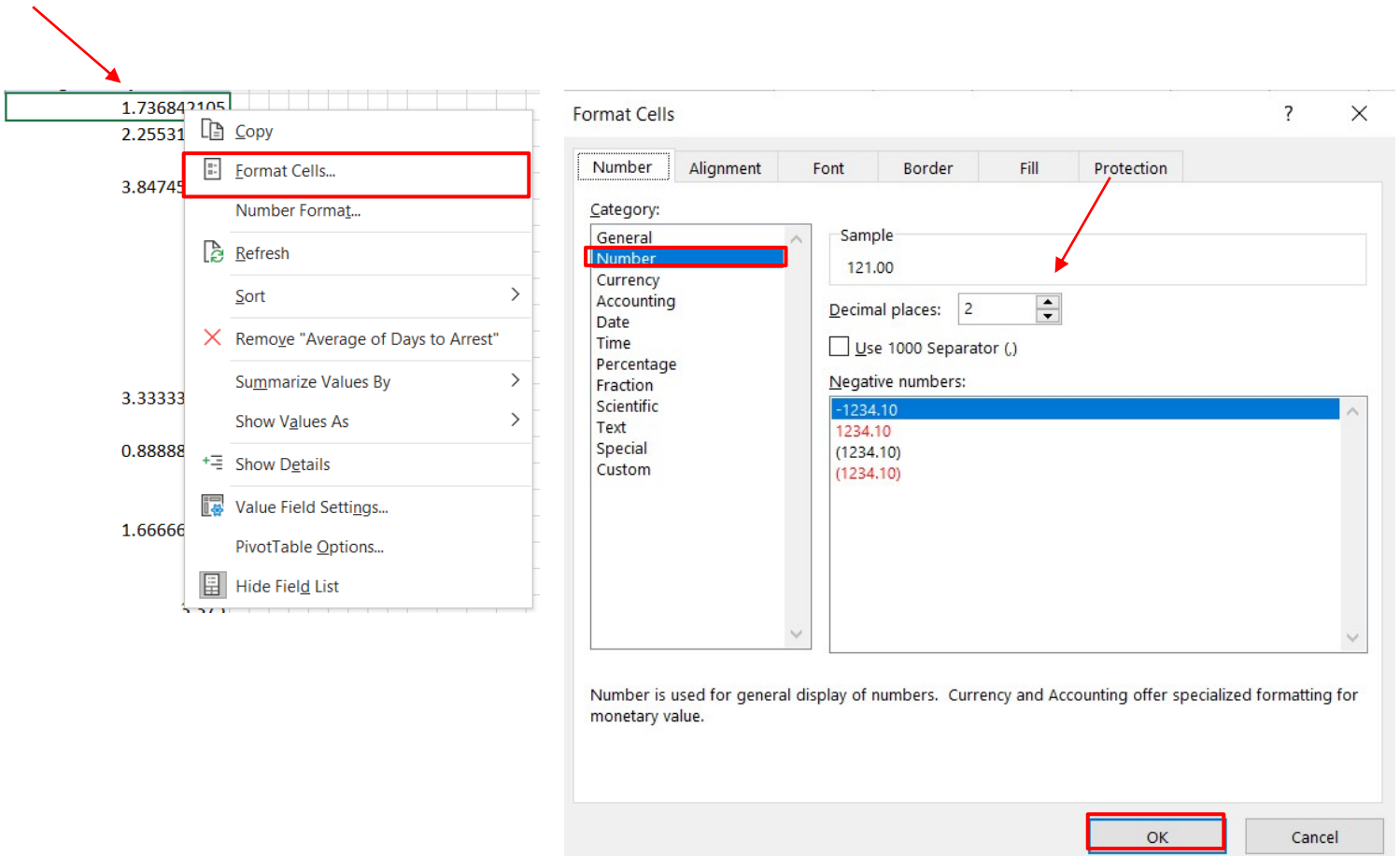
Summarize value field by

Choose the type of calculation that you want to use to summarize data from the selected field

- Sum
- Count
- Average**
- Max
- Min
- Product

Number Format OK Cancel

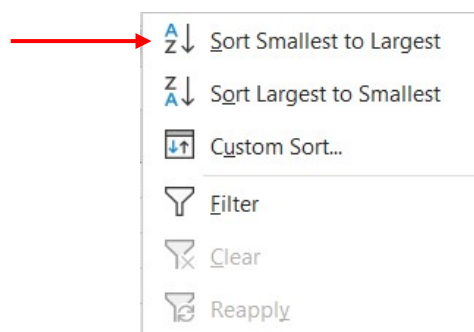
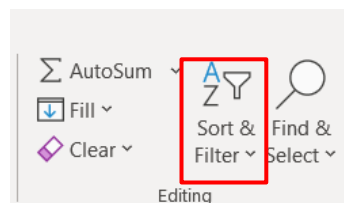
3. Since the data is an average of days, we have some averages with a *lot* of decimal points. To make our data easier to read, we are going to cut our average off after two decimal points. You can **highlight** the average column, **right click**, click "**Format Cells**". You will then go to number and set Decimal places at two and click **OK**. Now your average is at two decimal places.



Row Labels	Average of Days to Arrest
AGG ASLT ENHANC STRANGL/SUFFOC	1.74
AGG ASLT STRANGLE/SUFFOCATE	2.26
AGG ASLT W/MOTOR VEH FAM/DAT V	0.00
AGG ASSAULT	3.85
AGG ASSAULT FAM/DATE VIOLENCE	2.00
AGG ASSAULT ON PEACE OFFICER	1.00

4. Now we should have a pivot table with the average day(s) to arrest for each crime type! The next and final step is copying the data to a new sheet so we can **sort** our data by highest average of days to arrest. This will show us which offenses had the highest average days between a report being made and an arrest taking place. After you have copied and pasted your data to a new sheet, **highlight** the average days column, and click **Sort and Filter** (located on the far right of your home screen tab) and sort from **largest to smallest**. Now we can see which offenses had the most time between report and arrest!

3	Row Labels	Average of Days to Arrest
4	AGG ASLT ENHANC STRANGL/SUFFOC	1.74
5	AGG ASLT STRANGLE/SUFFOCATE	2.26
6	AGG ASLT W/MOTOR VEH FAM/DAT V	0.00
7	AGG ASSAULT	3.85
8	AGG ASSAULT FAM/DATE VIOLENCE	2.00
9	AGG ASSAULT ON PEACE OFFICER	1.00
10	AGG ASSAULT WITH MOTOR VEH	4.00
11	AGG FORCED SODOMY OF CHILD	15.00
12	AGG ROBBERY/DEADLY WEAPON	12.00
13	AGG SEXUAL ASSAULT CHILD/OBJEC	14.50
14	AIRPORT - CRIMINAL TRESPASS	14.00
15	ARSON	3.33
16	ASSAULT CONTACT-SEXUAL NATURE	0.00
17	ASSAULT BY CONTACT	0.89
18	ASSAULT BY CONTACT FAM/DATING	1.24
19	ASSAULT BY THREAT	0.20
20	ASSAULT BY THREAT FAM/DATING	1.67
21	ASSAULT OF A PREGNANT WOMAN	0.00
22	ASSAULT OF PREGNANT WM-FAM/DAT	0.00
23	ASSAULT ON PEACE OFFICER	3.38
24	ASSAULT ON PUBLIC SERVANT	0.38
25	ASSAULT W/INJURY-FAM/DATE VIOL	0.99
26	ASSAULT WITH INJURY	0.63
27	AUTO THEFT	7.08
28	BREACH OF COMPUTER SECURITY	2.00
29	BURGLARY NON RESIDENCE	3.44



Final Product

A	B
Crime Type	Average Days to Arrest
INDECENT ASSAULT	121.00
THEFT OF TRAILER	58.00
IMPERSONATING PUBLIC SERVANT	51.00
DOC WINDOW PEEPING-RESIDENCE	48.00
INJURY TO ELDERLY PERSON - SBI	36.00
FALSE STATEMENT -OBTAIN CREDIT	35.00
STATUTORY RAPE OF CHILD	31.00
TERRORISTIC THREAT-MASS CASLTY	27.00

