

## **HAPPY BIRTHDAY**

Chances that somebody has a birthday today: 66.601 %

365.25 All possible birthdays

Probability of a random person having a birthday today = 1/365.25

Probability of a random person not having a birthday today = 364.25/365.25 = 0.997262

Probability of n random people not having a birthday today :  $(0.997262)^n$ 

Probability of 400 random people not having a birthday today = 33.399 %

So, Probability of at least one of 400 random people having a birthday today = (100 - 33.399) %

=RAND()

returns a pseudo random value 0<=RAND<=1

We often need whole numbers.

= ROUND(RAND(),0) (Either 0 and 1)

=RANDBETWEEN(1,4)

gives a pseudo random value between 1 and 4 Always 1,2,3 or 4

Create Pivot table.

Carrier: Rows

values: ARR DELAY

Instead of Count of ARR\_DELAY, we can choose "Average" from the Value properties table

Choose: "Sort options" and choose descending/ascending

Calculate likelihood of flights getting cancelled.

Options: -> Fields, Items and Sets -> Calculate field

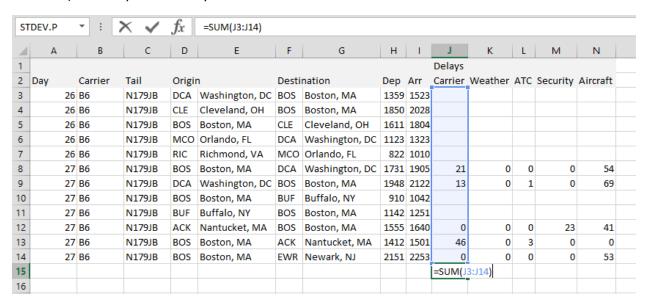
=sum(CANCELLED)/SUm(Counter)

get cancellation Probability

Create a counter column. That is always 1. Count doesn't work the same way in pivot table as it does in

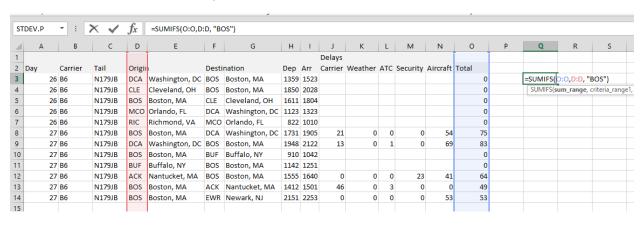
spreadsheet. Use: Sum(counter)

Answer 1) How may carrier delay minutes did this aircraft accumulate?



=SUM(J3:J14)

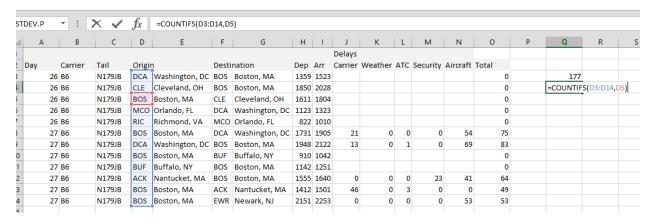
Answer 2) Calculate the total delay minutes that occurred in Boston?



=SUMIFS(O:O, D:D, "BOS") or = SUMIFS(O:O, D:D, D8)

(177)

## Answer 3) How many times did the plane leave Boston on time?

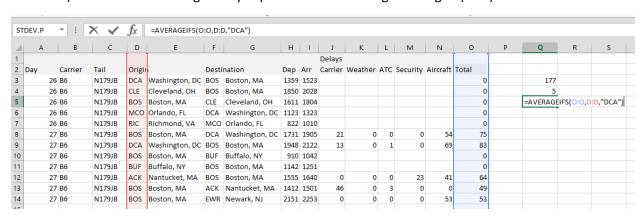


=COUNTIFS(D3:D14,"BOS")

=COUNTIFS(D3:D14,D5)

(5)

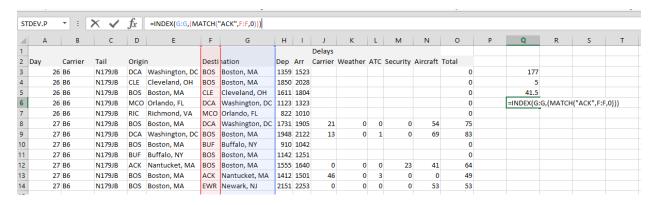
## Answer 4) What was the average delay experienced in Washington Reagan (DCA)?



=AVERAGEIFS(O:O,D:D,"DCA")

(41.5)

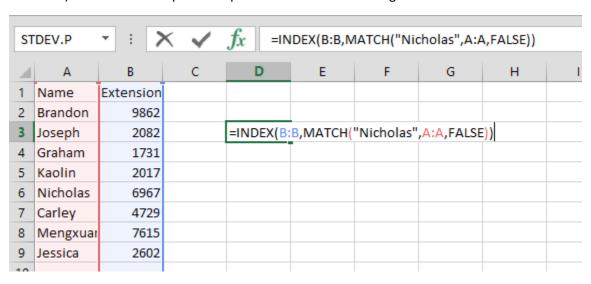
Answer 5) Bag supposed to go to ACK.



=INDEX(G:G,(MATCH("ACK",F:F,0)))

(Nantucket, MA)

Answer 6) Consider the simple list of phone extensions on the right.



=INDEX(B:B,MATCH("Nicholas",A:A,FALSE))

Answer 7) You want to give a prize to a random person from the list. Write a formula to randomly return a name.

STDEV.P $\rightarrow$ : $\times$ $\checkmark$ $f_x$ =INDEX(A2:A9,RANDBETWEEN(2,9))										
4	Α	В	С	D	E	F	G	н	1	J
1	Name	Extension								
2	Brandon	9862								
3	Joseph	2082		6967			=INDEX(A2:A9,RANDBETWEEN(2,9))			
4	Graham	1731								
5	Kaolin	2017								
6	Nicholas	6967								
7	Carley	4729								
8	Mengxuar	7615								
9	Jessica	2602								
10										

=INDEX(A2:A9,RANDBETWEEN(2,9))

Answer 8) Write a formula to create celcius value!

What's the temperature in F?	70
In Celcius that would be:	=(J3-32)/1.8

## Answer 9)

