

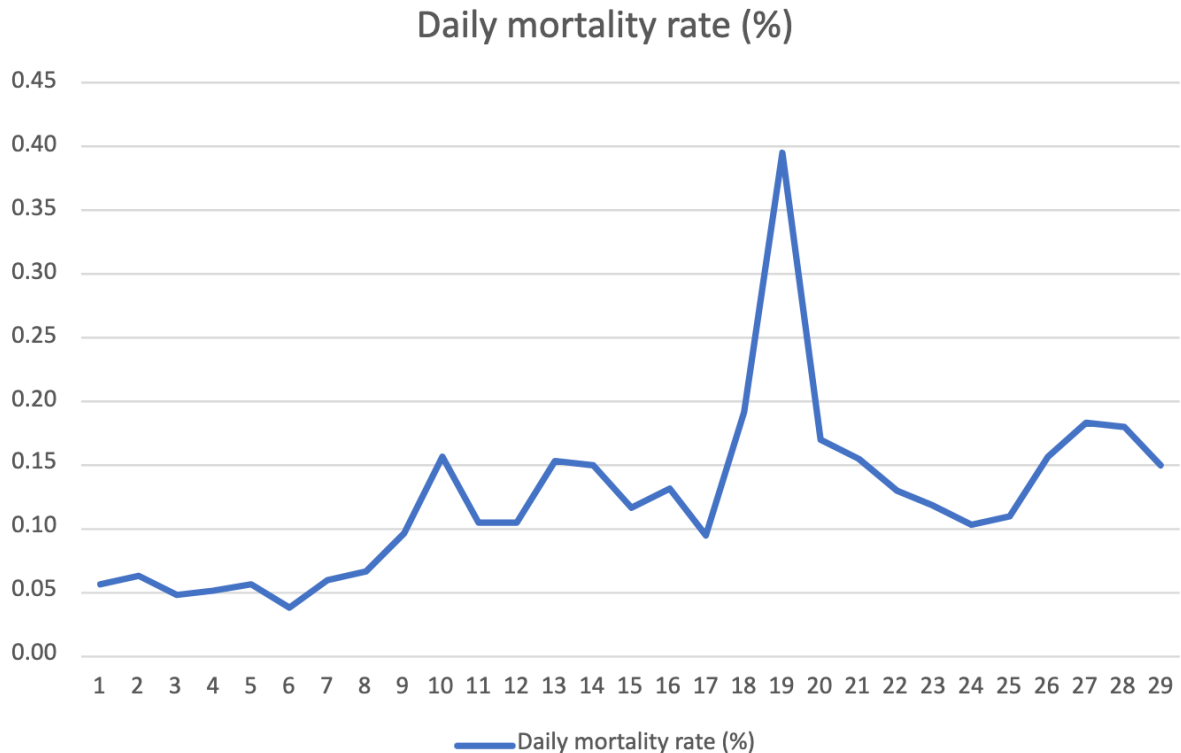
Answer Key

Creating line graphs to monitor changes over time

Using the provided database, make a line graph of Daily mortality rate (%) as a function of bird age in days. On what day was bird mortality the highest? *Day 19, or, when the birds were 19 days old*

Solution:

This is the graph that you will generate:



To create this graph, first select the **Daily mortality weight (%)** column by clicking the column identifier:

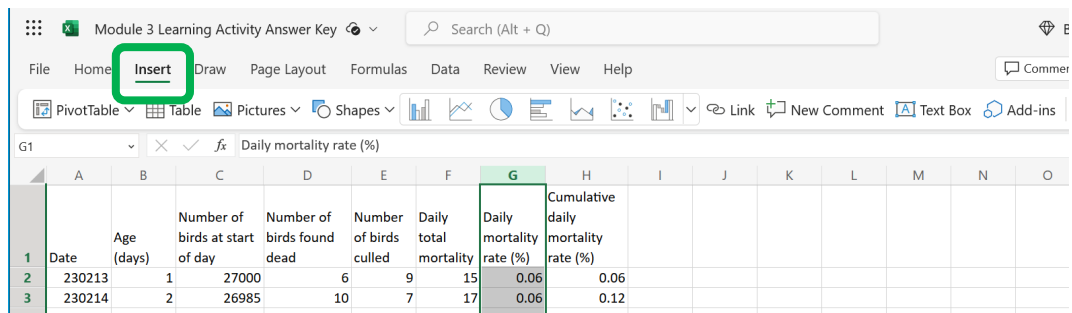
The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H
	Date	Age (days)	Number of birds at start of day	Number of birds found dead	Number of birds culled	Daily total mortality	Daily mortality rate (%)	Cumulative daily mortality rate (%)
1								
2	230213	1	27000	6	9	15	0.06	0.06
3	230214	2	26985	10	7	17	0.06	0.12
4	230215	3	26968	8	5	13	0.05	0.17
5	230216	4	26955	8	6	14	0.05	0.22
6	230217	5	26941	6	9	15	0.06	0.27
7	230218	6	26926	5	5	10	0.04	0.31
8	230219	7	26916	9	7	16	0.06	0.37

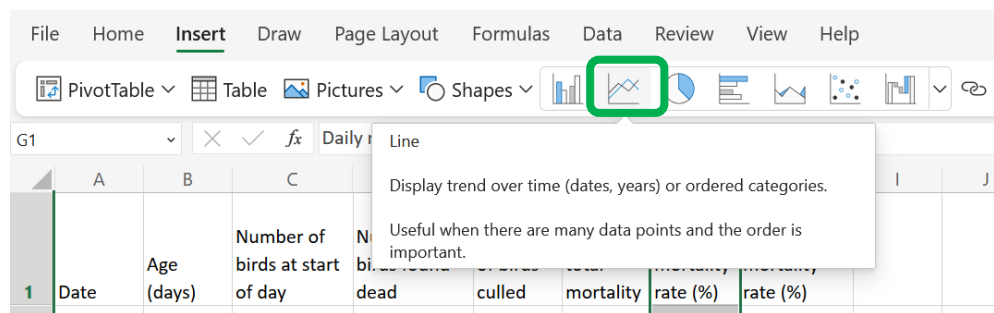
Answer Key

Creating line graphs to monitor changes over time

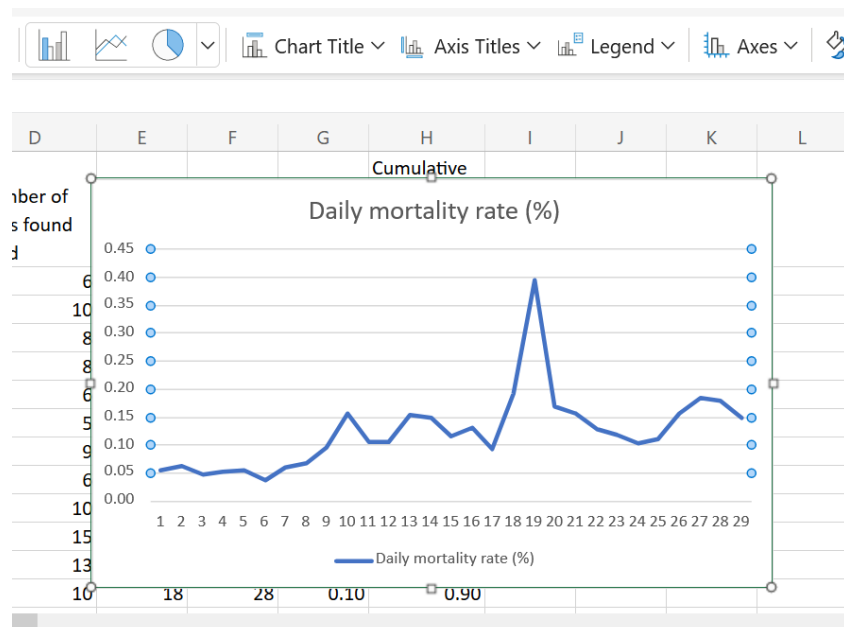
Then click on the **Insert** tab in the Excel ribbon located next to the **Home** tab. It will be underlined when active, as shown below:



Click on the “line graph” button in the Excel ribbon, circled below:



The graph will then be generated:

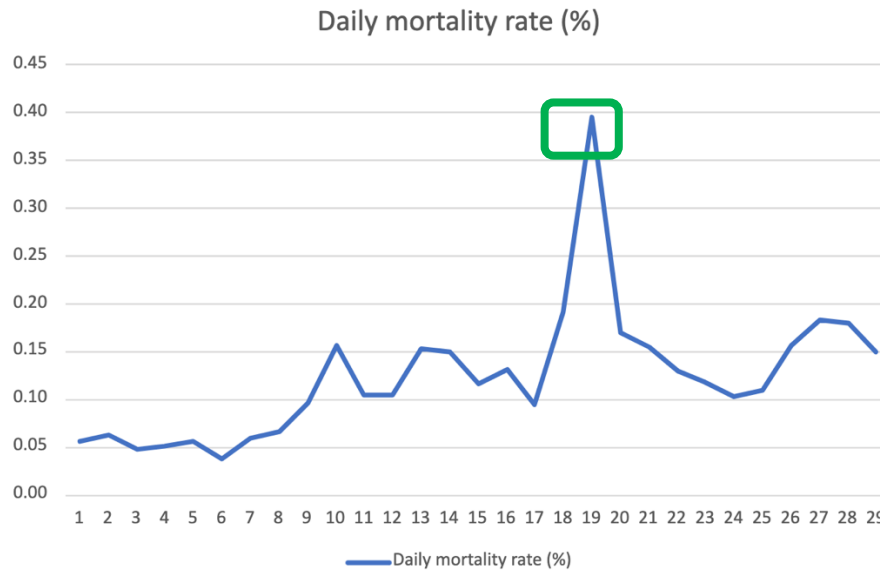


Each point on the horizontal axis (x-axis) corresponds to a different row of data in the spreadsheet. Each row corresponds to one day. On day 1 of recording, the birds were 1 day old. Therefore, each observation corresponds to the age of birds in days.

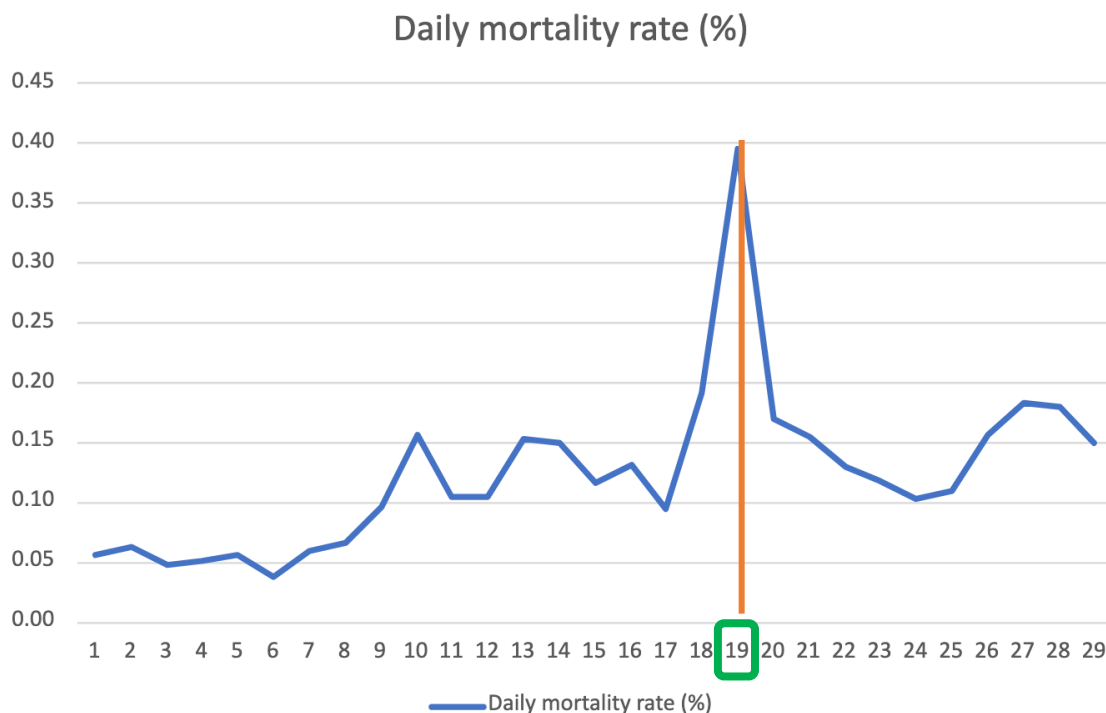
Answer Key

Creating line graphs to monitor changes over time

To determine the day on which the “Daily mortality rate” was at its highest, find the point with the highest value on the y-axis. In this case it is the spike measuring 0.4% on the y-axis circled below:



Then look at the value on the x-axis that corresponds to this point on the y-axis, by following a vertical line down to the x-axis value on the graph, as shown below:



In this case the highest value of **0.4%** occurred on **day 19**, which is when the birds were 19 days old.

Therefore, the **Daily mortality rate (%)** was highest on **Day 19**, when birds were 19 days old.