

## Scientific method and data analysis

### QUIZ TIME

1. A scientist wanted to determine the toxicity of venom in five species of snake. He collected data on the mortality (or death rate) from each snake species' bites.

Snake	Mortality percentage
Western Diamondback	7%
Eastern Coral	12%
King Cobra	42%
European viper	3%
Bushmaster	99%

**Which of the following lists the snakes from most deadly to least deadly?**

Choose 1 answer:

A	B
Bushmaster, Western Diamondback, European viper, King Cobra, Eastern Coral	Bushmaster, King Cobra, Eastern Coral, Western Diamondback, European viper
C	D
European viper, Western Diamondback, Eastern Coral, King Cobra, Bushmaster	European viper, Bushmaster, King Cobra, Eastern Coral, Western Diamondback

2. A biology student wanted to study the effect of fertilizer on the growth of tomato plants. He placed an equal number of tomato plants into two containers. Each day for one week, Container A received only water, while Container B received a mixture of fertilizer solution.

The table below shows the average height of the plants over the course of the experiment.

Day	Container A - Average height (cm)	Container B - Average height (cm)
1	3	3
2	3.2	3.3
3	3.3	3.9
4	3.5	4.3
5	3.7	4.6
6	3.8	4.9
7	3.9	5.1

**Which of these statements best describes the results shown in the table?**

Choose 1 answer:

A	B
The height of the plants levels off around day 5.	The plants in Container B were negatively affected by the fertilizer.
C	D
The plants in Container A did not experience growth.	The plants grown with fertilizer solution have a higher average height than the plants grown with only water.

3. An ecologist calculated the average yearly rainfall in a local valley. His data is organized into the table below.

Month	Rainfall (mm)
January	16
February	20
March	29
April	23
May	15
June	7
July	3
August	1
September	2
October	4
November	6
December	11

In which month was rainfall the heaviest?			
Choose 1 answer:			
A		B	
August		November	
C		D	
March		April	

4. A biology student wanted to determine if there is a relationship between resting heart rate and body height. She gathered information from 12 classmates and constructed the table below.

Student height (cm)	Resting heart rate (beats per minute)
155	60
156	65
156	78
165	72
170	67
175	62
175	80
180	64
180	73
190	68
194	78
195	63

<b>Which of the following is best supported by the data in the table?</b>			
Choose 1 answer:			
A		B	
There is no direct correlation between height and resting heart rate.		The shorter the student, the higher the resting heart rate.	
C		D	
The taller the student, the higher the resting heart rate.		A higher resting heart rate results in student growth.	

