

# Northview Collegiate

## UNIT 3 Quiz

Course Code: MDM4U

Date.....



K/U:	T/I:	A:	C:
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### 1. K/U

The table lists the heights of the 20 girls who signed up to try out for their school basketball team.

Height (cm)	Frequency	Cumulative Frequency
155–160	1	1
160–165	3	4
165–170	4	8
170–175	7	15
175–180	3	18
180–185	1	19
185–190	0	19
190–195	1	20

- a) Determine the median, range, first and third quartiles, and interquartile range. Create a box and whisker plot of the data.

### 2 T/I

Identify the type of bias and suggest how the same data could be researched without bias.

- a) Your teacher asks you to raise your hand if you understood the lesson.
- b) City council conducts a survey about the police force by asking everyone who comes to the next council meeting.
- c) The local news posts a poll on its website asking if climate change is real.
- d) An application to join a gym asks how much you like exercising.
- e) A store that sells hunting gear petitions to lower the cost of registering a gun.

### 3 A

A food manufacturer makes 2-L jars of pasta sauce. Samples are tested for how close to 2 L the jars are filled. Fifteen samples were taken and their volumes, in litres, were as indicated:

2.11	2.02	2.10	1.99	1.92	2.01	1.89	1.96
2.00	1.96	1.98	2.02	2.08	2.15	2.03	

- a) Determine the sample mean and standard deviation.
- b) Calculate the  $z$ -score of the jar that was filled to a volume of 2.02 L. Interpret its meaning.

### 4 C

Describe how each pair of sampling methods are similar and different. Provide examples to support your answers.

- a) multistage versus stratified
- b) convenience versus voluntary



