

# Northview Collegiate

Unit 3 Quiz

Course Code: MDM4U

Name:

Date:



K/U:	T/I:	A:	C:
/5	/5	/5	/5

**K/U**

**1.**

Identify each case as an observational or experimental study. Indicate what relationship is being studied.

- People are asked if they have had magnetic therapy and whether their pain is reduced.
- As part of a study to gain information regarding travel to Mars, NASA is paying subjects \$18 000 to lie in bed for 70 days.
- Two randomly selected groups of 100 students are studied. One group has all left-handed students while the other has right-handed students. Their math grades are collected and analysed.

2.

**T/I**

A student drops a ball from various heights and measures the height of the bounce. The table shows the results.

- a) Is this a study or an experiment? Explain.
- b) What is being controlled and what is being changed in this activity?
- c) What is the relationship between the drop height and the bounce height?
- d) Create a graph of the data. Describe the relationship in the graph.
- e) If you dropped the ball from a height of 130 cm, could you use this information to predict its bounce height? If so, explain how.

Drop Height (cm)	Bounce Height (cm)
0	0
10	7
20	14
30	21
40	30
50	38
60	46
70	51
80	60
90	62
100	70



**C.**

Give an example to show each type of bias.

- |             |                 |
|-------------|-----------------|
| a) sampling | b) measurement  |
| c) response | d) non-response |

**A.**

For each survey question, identify the problem with the question and rewrite it.

**a)** How old are you?

- ☐ 15 and below   ☐ 15–20  
☐ 20–35   ☐ 35–60   ☐ Above 60

**b)** Violence in video games could cause people to be violent in real life. How do you feel about a violence rating system for video games?

- ☐ Strongly agree   ☐ Agree  
☐ Agree a little   ☐ Don't agree

**c)** Do you like the new logo for the school?

- ☐ Yes   ☐ No