

# U4D4 Skill Reflection: Trends in Data

Monday, March 26, 2018 12:15 PM



U4 Trends  
in Data Q...

MPM1DI-04  
Mrs. Behnke

16

Name: \_\_\_\_\_

## Trends in Data ~~QUIZ~~ Skill Reflection

A researcher wants to know if there is a correlation between Type 2 Diabetes in adolescences (12 to 19 years old) over time. The researcher uses data found on the public health website.

Year	Percent of adolescence (12 to 19) that have Type 2 Diabetes
1970	4
1974	6
1978	5
1982	7
1986	9
1990	10
1994	12
1998	11
2002	13
2006	14
2010	14
2014	15

a) Is this data an example of primary or secondary data? Explain.

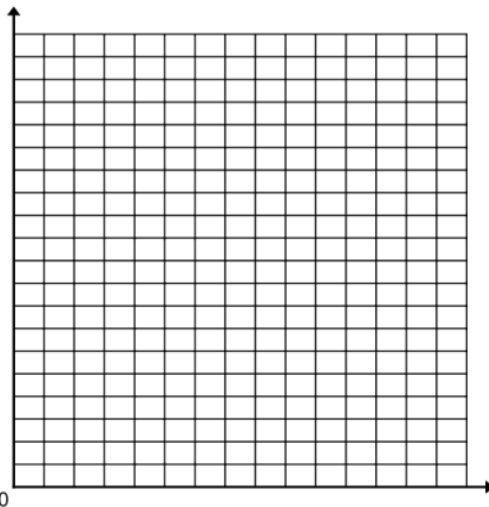
/2

b) Identify the independent and dependent variable?

/1

c) Draw a scatter plot and determine the line of best fit.

/5



d) Describe the relationship between the year and the percent of adolescence that have Type 2 Diabetes.

/1

e) Draw a circle around any points that are outliers. If there are none, below write "no outliers".

/1

f) If the researcher wanted to predict using interpolation, what year might they choose to use? Make a prediction of the percent of adolescence that will have Type 2 diabetes in the year you choose. **(Show your work on the graph)**

/3

g) If the researcher wanted to predict using extrapolation, what year might they choose to use? Make a prediction of the percent of adolescence that will have Type 2 diabetes in the year you choose. **(Show your work on the graph)**

/3



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Name: Marker

**Trends in Data QUIZ**

A researcher wants to know if there is a correlation between Type 2 Diabetes in adolescences (12 to 19 years old) over time. The researcher uses data found on the public health website.

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a) Is this data an example of primary or secondary data? Explain.

12 Secondary ✓  
= Not collected by researcher. ✓

b) Identify the independent and dependent variable?

1 independent - Year ✓  
dependent - Percent ✓

c) Draw a scatter plot and determine the line of best fit.

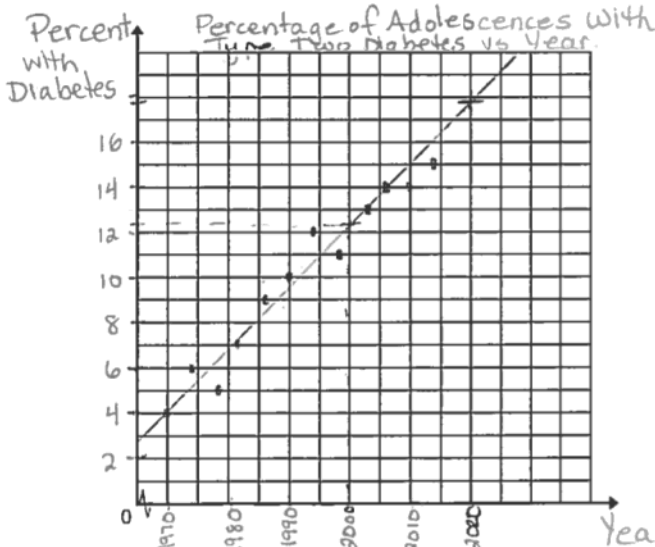
15 ✓ scales  
✓ labels, title  
✓ points plotted properly  
✓ line of best fit.

d) Describe the relationship between the year and the percent of adolescence that have Type 2 Diabetes.

1 As the year increases, the percent increases. ✓

e) Draw a circle around any points that are outliers. If there are none, below write "no outliers".

1 no outliers. ✓



f) If the researcher wanted to predict using interpolation, what year might they choose to use? Make a prediction of the percent of adolescence that will have Type 2 diabetes in the year you choose. (Show your work on the graph)

In the year 2000 we expect 12.4% of adolescences to have type two diabetes

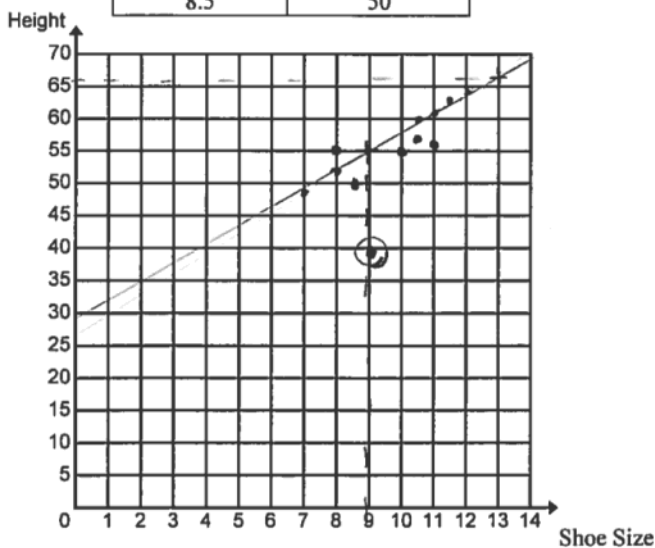
g) If the researcher wanted to predict using extrapolation, what year might they choose to use? Make a prediction of the percent of adolescence that will have Type 2 diabetes in the year you choose. (Show your work on the graph)

In the year 2020, we w

**Trends in Data** ~~QUIZ~~ *Skill Reflection*

A researcher wants to know if there is a correlation between the height of a boy in grade 9 and his foot size. The researcher uses all 204 male grade 9 students at W-O as the population. Twelve students are required for the sample. To determine these 12 students, the researcher creates an alphabetized list of all grade nine boys and numbers them 1 to 204. The researcher chooses a random boy from the first 17 boys on the list and every 17<sup>th</sup> boy on the list after that. The following table of values shows the measurements that were collected.

Boy's shoe size	Height of Grade 9 Boy in inches
11.5	63
11	61
8	52
10.5	60
12	64
9	39
10	55
8	55
7	48
10.5	57
11	56
8.5	50



- a) Is this data an example of primary or secondary data? Explain.
  - Primary
  - Researcher collected the data him/herself
- b) Which type of random sampling did this researcher use?
  - systematic random sampling
- c) Draw a scatter plot and determine the line of best fit.

/5

- d) Describe the relationship between the shoe size of a Grade 9 boy and their height.
  - As the shoe size increases, the height also increases.
- e) Draw a circle around any points that are outliers. If there are none, below write "no outliers".

/1

- f) If a boy's shoe size is 13, predict the height of the grade 9 boy. (Show your work on the graph)? Is this an example of interpolation or extrapolation?
  - I would expect the boy to be 66 inches tall
  - This is extrapolation
- g) If a grade 9 boy is 55 in tall, predict the shoe size of the boy. (Show your work on the graph)? Is this an example of interpolation or extrapolation?
  - I would expect the boy to have a size 9 shoe
  - This is interpolation

/3

/3