Name:_____ Date: _____

ID #:_____

Please tell us about yourself

Gender: Male ____ Female____ **Age:** _____**School:** _____ **Grade:** _____

Ethnicity: American Indian/Alaskan Native____ Asian____ Black/African American____
Hispanic/Latino____ Multiracial____ Pacific Islander____ White ____

Do you want to be an engineer or scientist in the future? Please explain why or why not

What kinds of things do scientists and engineers study? Please give several examples.

How can you use what you learn in your math or science classes in real life? Please give an example.

Please select the number below that best represents how you feel about each statement.

1= Strongly Disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly Agree

Statement	**SD**				**SA**
I think studying about culture (for example life in Africa or Mexico) is boring	1	2	3	4	5
I am interested in studying math or science in college	1	2	3	4	5
Helping others is very important to me	1	2	3	4	5
I think that understanding science and math can make me a better athlete	1	2	3	4	5
I like to watch sports in my free time	1	2	3	4	5
I know someone in my family who uses science or math in their career	1	2	3	4	5
I am interested in learning about the culture of my heritage	1	2	3	4	5
I get good grades in my math and science classes	1	2	3	4	5
I like to play sports in my free time	1	2	3	4	5
I like to use math or science when I am not in class to solve problems that interest me.	1	2	3	4	5
I think that scientists and engineers help people	1	2	3	4	5
I am interested in participating in science activities such as robotics clubs or Science Olympiad after school	1	2	3	4	5
I want to play a varsity sport when I am in high school	1	2	3	4	5
Computer science is useful for things outside of school	1	2	3	4	5
If I do well in science classes, it will help me in my future career	1	2	3	4	5
Some people did not have math as part of their traditional culture	1	2	3	4	5
I have a role model in a science, engineering or math career.	1	2	3	4	5

Name:_____ Date: _____

1) Define the following terms in your own words. You may draw images to help you explain.

a) Exponential Growth

b) Exponential Parameter

c) Tangent Vector

d) Angle

e) Degree

f) Cartesian Plane

2) Describe how you would create the following figure using math or computing.

3) Name three examples of logarithmic spirals in nature.

a)

b)

c)

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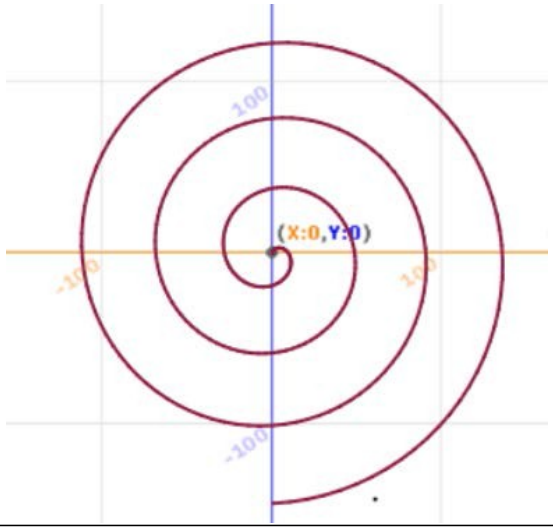
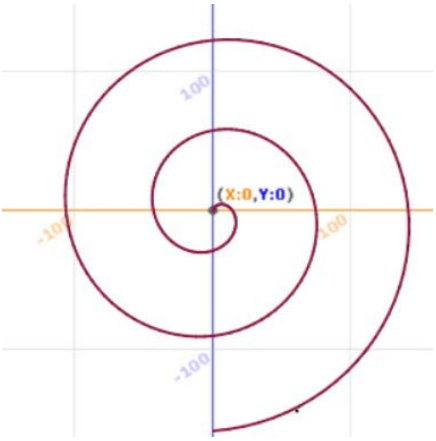
4) Look at spirals a, b, and c below. Put the spirals in order from the smallest to the largest exponential parameters. 1 being the smallest and 3 being the largest.

1._____2._____3. _____

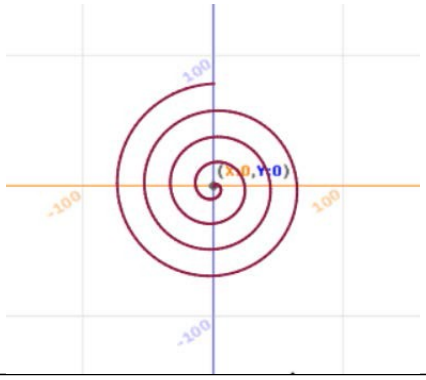
a.



b.



c.



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5) Give three examples of logarithmic spirals in everyday life.

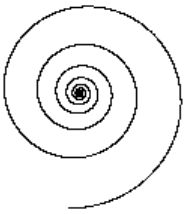
a)

b)

c)

6) Look at shapes a and b, which shape is found more in nature? Circle the answer below.

a. 

b. 

c. Neither shape is found in nature.

7) The arrows below are tangent vectors that are missing their circles. Draw a circle for each tangent vector.

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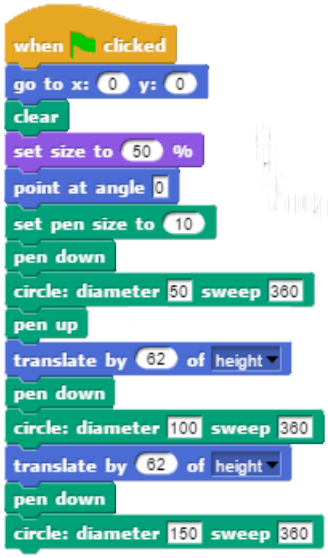
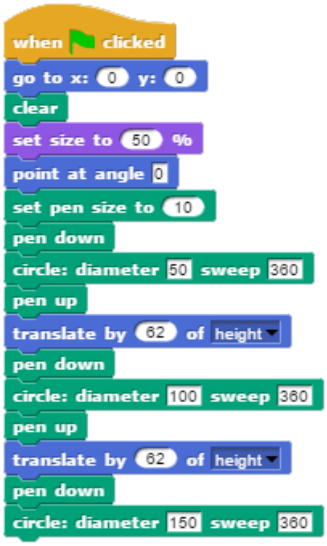
8) Look at the image below and determine which script was used to create it:

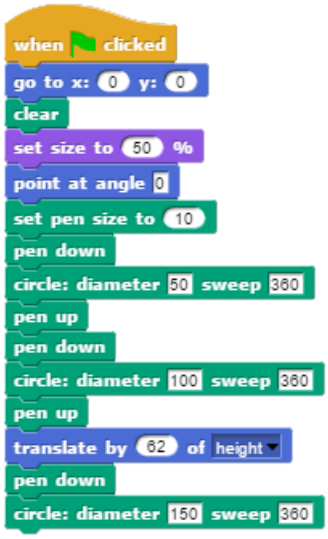
A.



B.



C.



Answer: _____