1.

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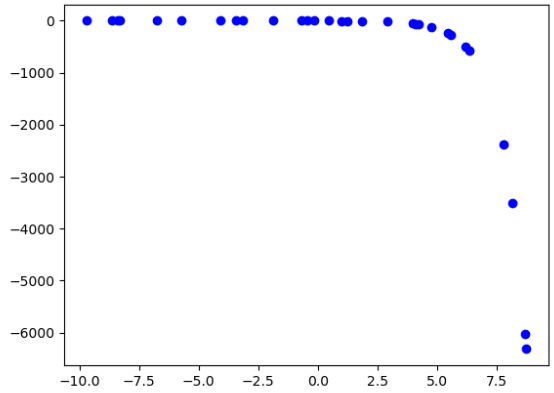
2. Determine the appropriate model for the graph of points below.



A. Non-linear Power model

B. Linear model

C. Logarithmic model

D. Exponential model

E. None of the above

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3. Solve the modeling problem below, if possible.

A new virus is spreading throughout the world. There were initially 3 many cases reported, but the number of confirmed cases has doubled every 2 days. How long will it be until there are at least 10000 confirmed cases?

A. About 24 days

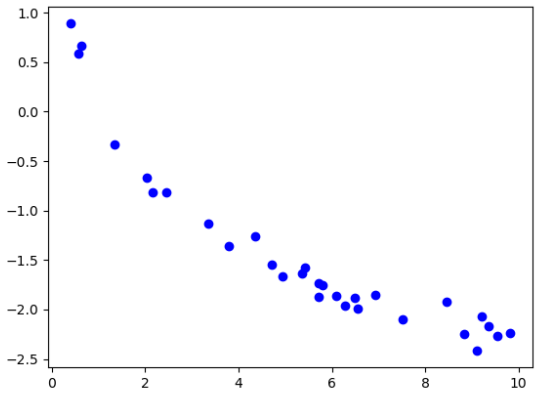
B. About 11 days

C. About 17 days

D. About 9 days

E. There is not enough information to solve the problem.

4. Determine the appropriate model for the graph of points below.



A. Exponential model

B. Non-linear Power model

C. Logarithmic model

D. Linear model

E. None of the above

5. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$.

Pringles wants to add 31 percent more chips to their cylinder cans and minimize the design change of their cans. They've decided that the best way to minimize the design change is to increase the radius and height by the same percentage. What should this increase be?

A. About 16 percent

B. About 9 percent

C. About 14 percent

D. About 10 percent

E. None of the above

6. Solve the modeling problem below, if possible.

A new virus is spreading throughout the world. There were initially 4 many cases reported, but the number of confirmed cases has tripled every 3 days. How long will it be until there are at least 100000 confirmed cases?

A. About 15 days

B. About 28 days

C. About 14 days

D. About 31 days

E. There is not enough information to solve the problem.

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7. Solve the modeling problem below, if possible.

In CHM2045L, Brittany created a 17 liter 29 percent solution of chemical χ using two different solution percentages of chemical χ. When she went to write her lab report, she realized she forgot to write the amount of each solution she used! If she remembers she used 20 percent and 32 percent solutions, what was the amount she used of the 20 percent solution?

A. 8.50

B. 4.25

C. 12.75

D. 9.65

E. There is not enough information to solve the problem.

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8. Solve the modeling problem below, if possible.

In CHM2045L, Brittany created a 20 liter 18 percent solution of chemical χ using two different solution percentages of chemical χ. When she went to write her lab report, she realized she forgot to write

the amount of each solution she used! If she remembers she used 11 percent and 31 percent solutions, what was the amount she used of the 31 percent solution?

A. 10.00

B. 7.00

C. 11.29

D. 13.00

E. There is not enough information to solve the problem.

9.

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10. For the scenario below, use the model for the volume of a cylinder as $V = \pi r^2 h$.

Pringles wants to add 42 percent more chips to their cylinder cans and minimize the design change of their cans. They've decided that the best way to minimize the design change is to increase the radius and height by the same percentage. What should this increase be?

A. About 19 percent

B. About 12 percent

C. About 3 percent

D. About 21 percent

E. None of the above
