Smith
Biology

Name _____

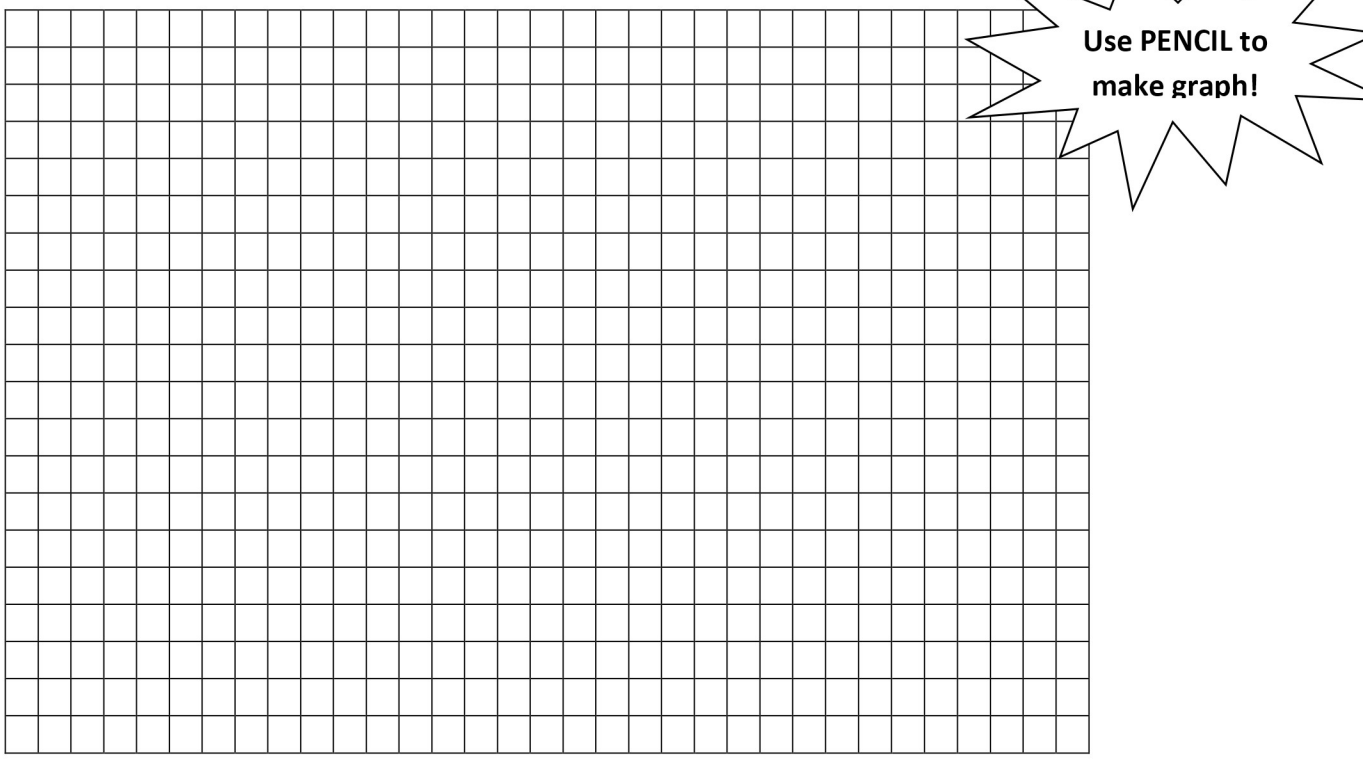
Graphing Practice

Practice Problem #1

Background: The thickness of the annual rings indicates what type of environmental situation was occurring the time of the tree's development. A thin ring usually indicates a rough period of development such as lack of water, forest fires, or insect infestation. On the other hand, a thick ring means a prosperous period of development. Use the information from the data table below to create a proper scientific graph and to answer the corresponding questions.

Age of Trees (in years)	Average Thickness of Annual Rings in Forest A (millimeters)	Average Thickness of Annual Rings in Forest B (millimeters)
10	20	24
20	24	28
30	30	35
35	34	38
50	41	45
60	46	51

1. What is the dependent variable? _____
2. What is the independent variable? _____
3. What was the average thickness of annual rings for 40 year old trees in Forest A? _____
4. What is it called when you make predictions within given data, such as made in question #3? _____
5. What was the mean thickness of annual rings for all trees found in Forest B? _____
6. Based on the data shown, what can be concluded about the comparative health of Forest A & B? _____
   _____
7. What type of relationship (constant, direct, or indirect) exists between the age of trees and the average thickness of the tree's rings? Explain. _____
   _____



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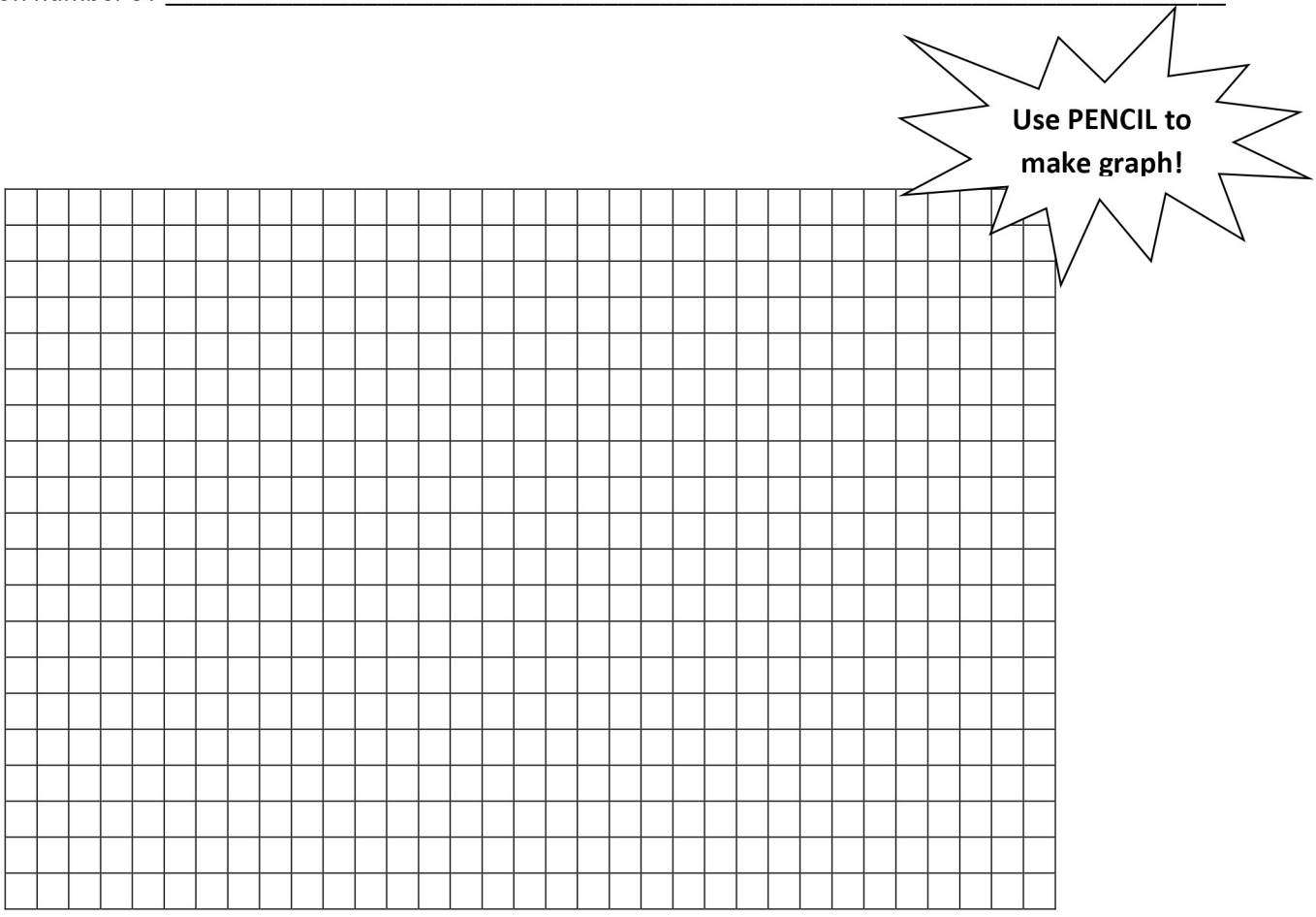
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Practice Problem #2

Background: Clams were placed into various temperatures of water. Use the information in the data table below in order to create a proper scientific graph and to answer the corresponding questions.

Water Temperature (°C)	Number of Developing Clams
15	72
20	92
25	120
30	140
35	99
40	72
45	36
50	0

1. What is the dependent variable? _____
2. What is the independent variable? _____
3. What is the optimum temperature for clam development? _____
4. What is the mean number of clams per sample? _____
5. Approximately how many clams would be developing in 10 degree Celsius water? _____
6. What is it called when you make predictions about data not yet recorded, such as the prediction we made in question number 5? _____



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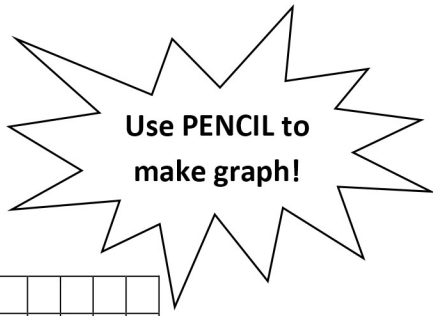
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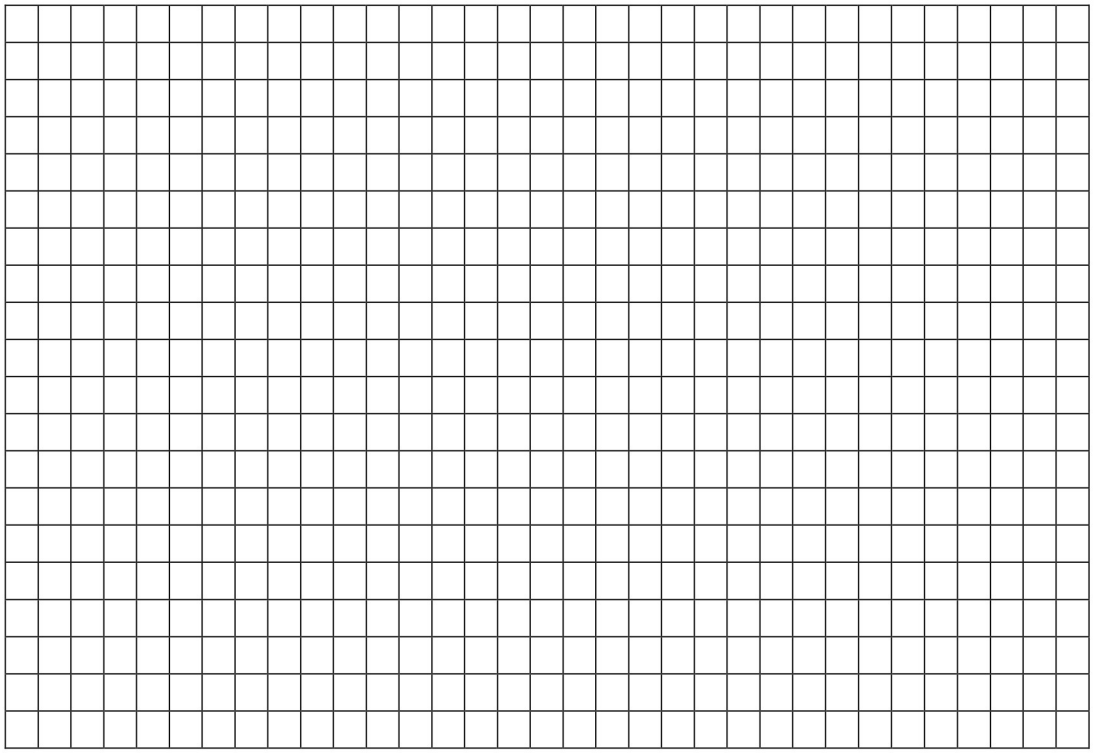
Practice Problem #3

Background: Natalie sets out to run 15 kilometers. Every 30 minutes she checked her pedometer to determine how far she had run. Use the data below to create a proper scientific graph and to answer the corresponding questions.

Time (minutes)	Total Distance (km)
0	0
30	6.8
60	10.1
90	12
120	13.3
150	15

1. What is the dependent variable? _____
2. What is the independent variable? _____
3. How many kilometers had Natalie run after 40 minutes? _____
4. What was Natalie's average speed (in kilometers per hour) over the course of her run? _____
   Use the formula Speed = Distance / Time



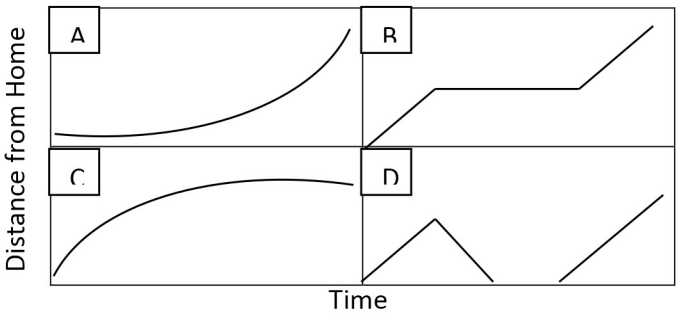


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Practice #4

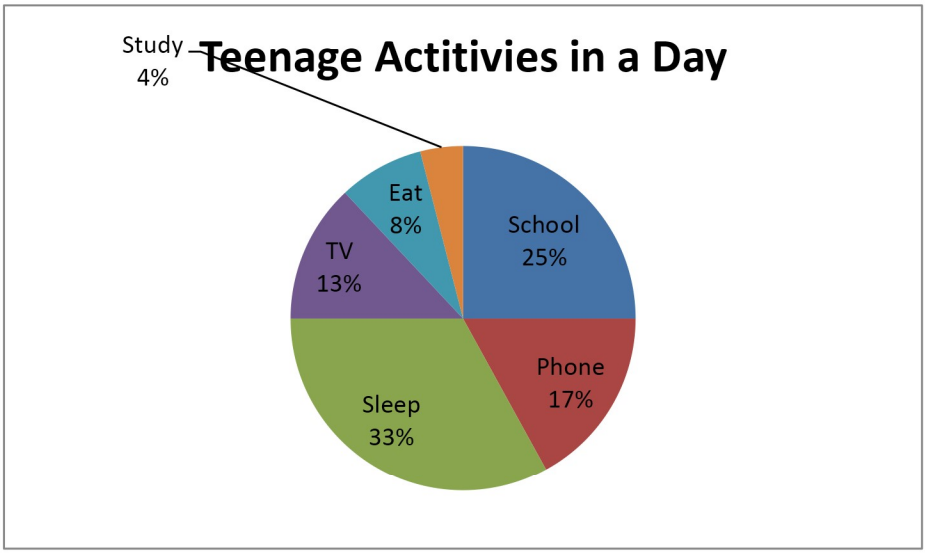
Background: Match each story on the left with the graph it represents on the right. Each graph compares the distance a car is from home compared to time.



____1. I had just left home when I realized I had forgotten my books, so I went back to pick them up.
____2. The battery on my electric car started to run down.
____3. Things went fine until I had a flat tire.
____4. I started out calmly, but sped up when I realized I was going to be late.

Practice Problem #5

Background: The pie chart shows the approximate percentages teenagers spend doing various activities in a day. Use the information in the pie chart to answer the questions below.



1. What percent of the day is spent watching TV? _____
2. How many hours are spent sleeping? _____
3. What activity takes up the least amount of time? _____
4. What activity takes up a quarter of the day? _____
5. What two activities take up 50% of the day? _____
6. What two activities take up 25% of the day? _____

Practice Problem #6

1. What is the dependent variable? _____
   _____
2. Does the price per bushel always increase with demand?
   _____
3. What is the quantity demanded when the price is $5 per bushel? _____
4. What is the price per bushel when the quantity demanded is 80? _____

