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## Graphing Practice



For all the following graphs, please be sure to label ALL parts of the graph. Each line graph and bar graph should include a title, labeled axes, and units. For multiple bar graphs or line graphs, please include a legend. The pie graph should include a title and legend or it should be clearly labeled on the graph itself.

## Line Graph

1. The thickness of the annual rings indicates what type of environment was occurring at the time of its development. A thin ring usually indicates a lack of water, forest fires, or a major insect infestation. A thick ring indicates just the opposite.

| Age of the tree in years | Average thickness of the annual <br> rings in Forest A (cm) | Average thickness of the annual <br> rings in Forest B (cm) |
| :---: | :---: | :---: |
| 10 | 2.0 | 2.2 |
| 20 | 2.2 | 2.5 |
| 30 | 3.5 | 3.6 |
| 40 | 3.0 | 3.8 |
| 50 | 4.5 | 4.0 |
| 60 | 4.3 | 4.5 |

A. Make a line graph of the data.

B.
C. What is the independent variable?
D. What was the average thickness of the annual rings of 40 year old trees in Forest $A$ ? in Forest $B$ ?
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E. Based on this data, what can you conclude about Forest A and Forest B ?
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## Pie Graph

2. During this last election, the following Republican candidates were battling it out for the office nomination to run for president. Here are the results of the primary polls from May 2016:

| Candidate | Percentage |
| :---: | :---: |
| Donald Trump | $27 \%$ |
| Ted Cruz | $40 \%$ |
| Marco Rubio | $10 \%$ |
| John Kasich | $9 \%$ |
| Ben Carson | $14 \%$ |

A. Make a pie graph.

B. If 300 people were polled, how many people voted for each candidate?
a. Donald Trump $\qquad$ d. Marco Rubio $\qquad$
b. Ted Cruz $\qquad$ e. Ben Carson $\qquad$
c. John Kasich $\qquad$
C. Why is a pie graph good displaying data for polls or surveys?
3.

| pH of water | Number of tadpoles |
| :---: | :---: |
| 8.0 | 45 |
| 7.5 | 69 |
| 7.0 | 78 |
| 6.5 | 88 |
| 6.0 | 43 |
| 5.5 | 23 |

A. Make a bar graph of the data.

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B. What is the dependent variable?
C. What is the independent variable?
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D. What is the average number of tadpoles collected per sample?
E. What is the optimum water pH for tadpole development?
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F. Between what two pH readings is there the greatest change in tadpole number?
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G. How many tadpoles would we expect to find in water with a pH reading of 5.0 ?

