

Bell Work

February 17 – 20, 2014

ACT Prep, Matter & Change

Bell Work, Monday, 2/17/13

1. A measure of the quantity of matter is

a. density.

c. volume.

b. weight.

d. mass.

2. What is mass?

Mass is how much “stuff” matter contains.

3. What is weight?

Weight is measure of the pull of gravity on a given mass.

4. A change in the force of Earth's gravity on an object will affect its

a. mass.

c. weight.

b. density.

d. kinetic energy.

Bell Work, Monday, 2/17/13

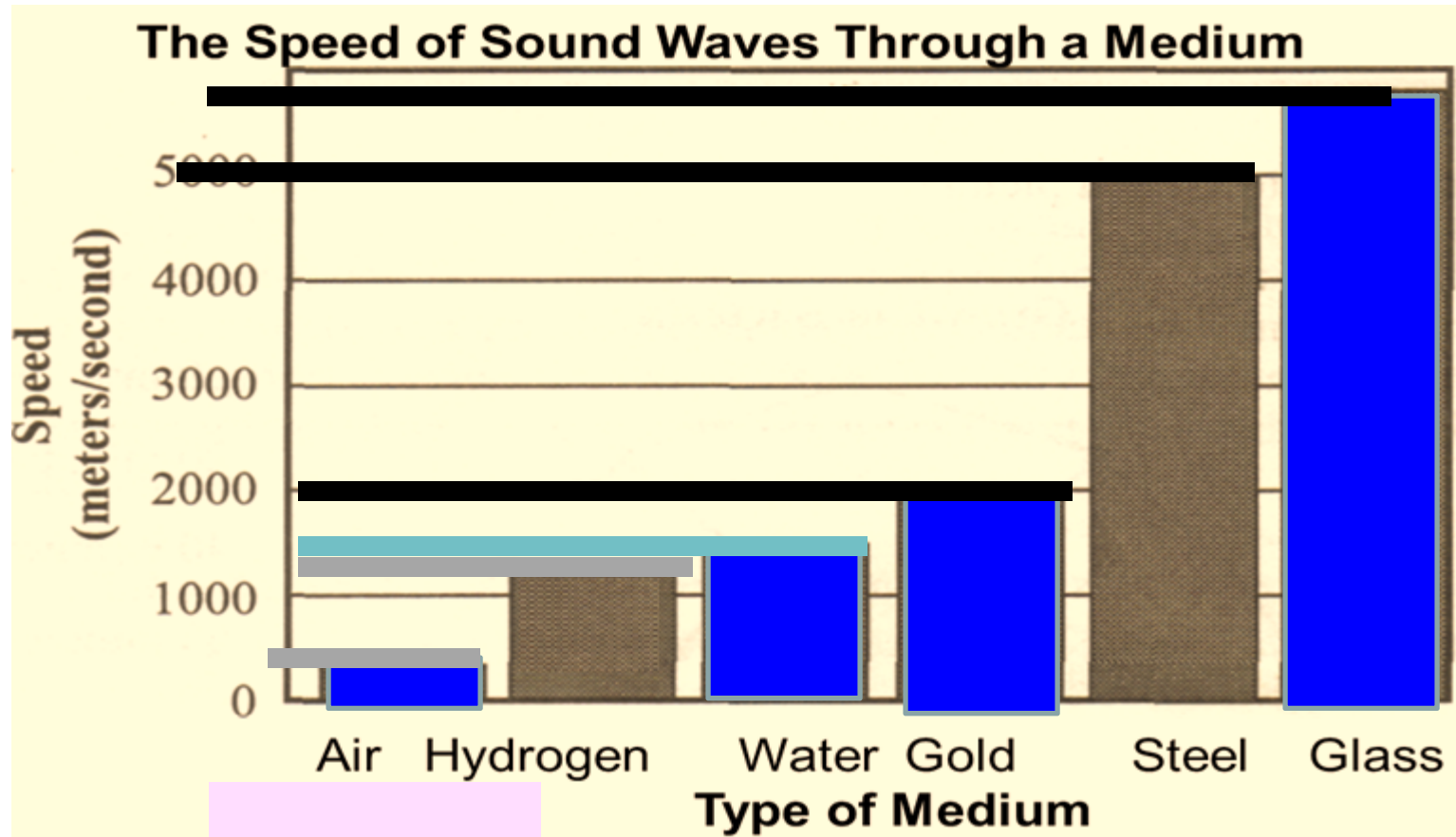
5. Define volume

Anything that takes up space that can be measured.

6. Define matter.

Anything that has volume (takes up space) and has mass.

Bell Work, Tuesday, Feb 18



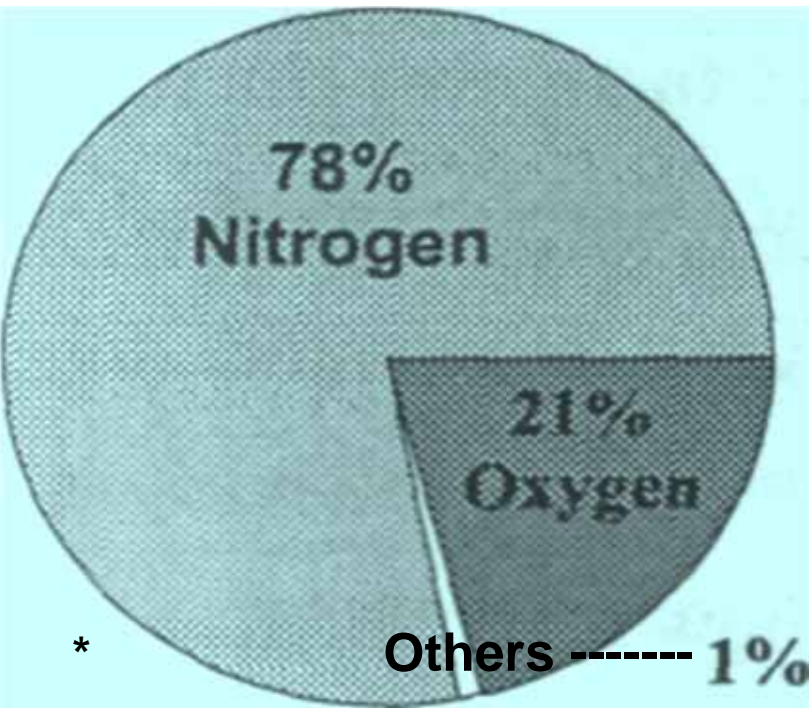
Draw & label the graph with only air, water, gold & glass.

1. Sound waves move fastest through

- A. Gas B. liquid C. solid D. all the same

Bell Work, Tuesday, Feb 18

Draw the chart below. This pie chart shows the percentages of gases in the atmosphere.



2. A pie chart (aka: circle graph) is used to show parts of a whole. Many times, circle graphs show percentages of a total. What is the total percent of the circle graph?

100%

3. Bar graphs are used to show

Individual (discrete) quantities of information.

4. Scatter plots (line graphs) are used to show

How one variable changes in relationship to another variable.

Bell Work, Wednesday, Feb 19, 2014

1. Keisha observes goldfish in an outdoor pond. **The goldfish seem to be more active when the weather is warm than when it is cold.** She asks herself how do temperature changes affect goldfish? If she were to do an experiment, **which of the following would be the best hypothesis.**

a. Do goldfish like warm water or cold water?

b. Goldfish live in warm and cold water.

c. Goldfish are more active in warm water than in cold water.

d. Temperature changes will kill goldfish.

Bell Work, Wednesday, Feb 19, 2014

2. For a science project, Hans conducted a taste test on 4 types of regular cola. As part of his research, he determined the percentages of the main ingredients in each cola. He found that the percent of sugar in the colas strongly correlated with taste preference. **Hans wanted to present the data showing the percentages of main ingredients of each cola as a main part of his project. Which of the following would be the best way to present this data?**

- a. in separate pie charts
- b. in a short paragraph summarizing each percentage
- c. in a multiple line graph
- d. in a data table

Bell Work, Wednesday, Feb 19, 2014

3. Four groups of rats are tested in a lab. Group 1 is given a special hormone for muscle growth. Group 2 is given a special multivitamin diet. Group 3 receives both the hormone treatment and the multivitamin diet. Group 4 does not receive any extra treatment or special diet. Which of the following groups is the control group for this experiment?

- A. group 4**
- B. group 2
- C. group 3
- D. group 1

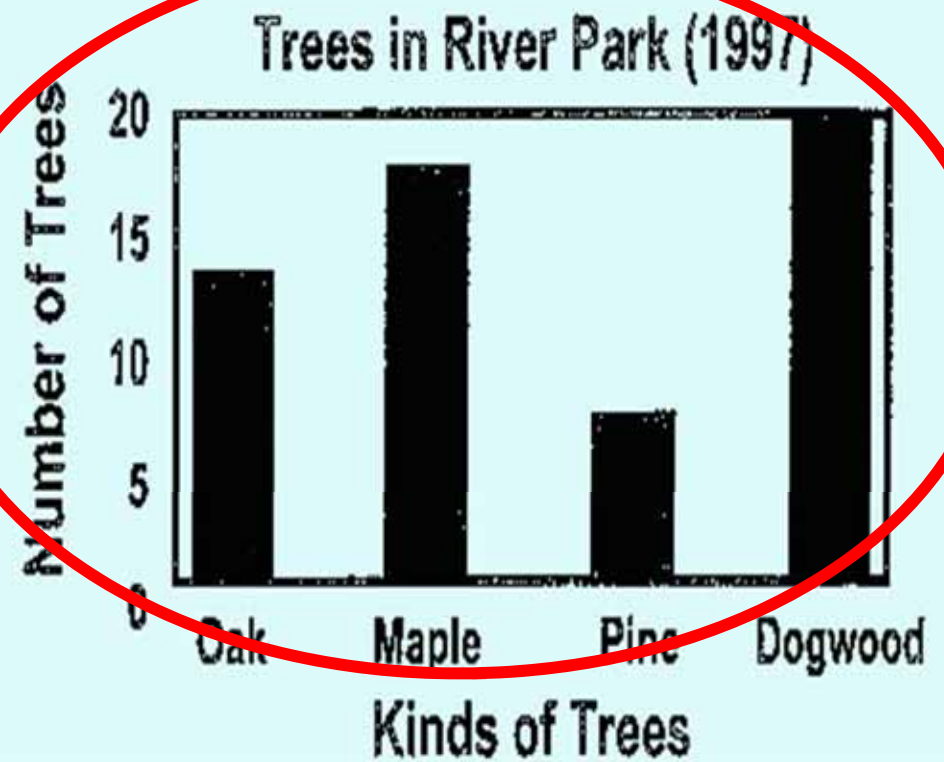
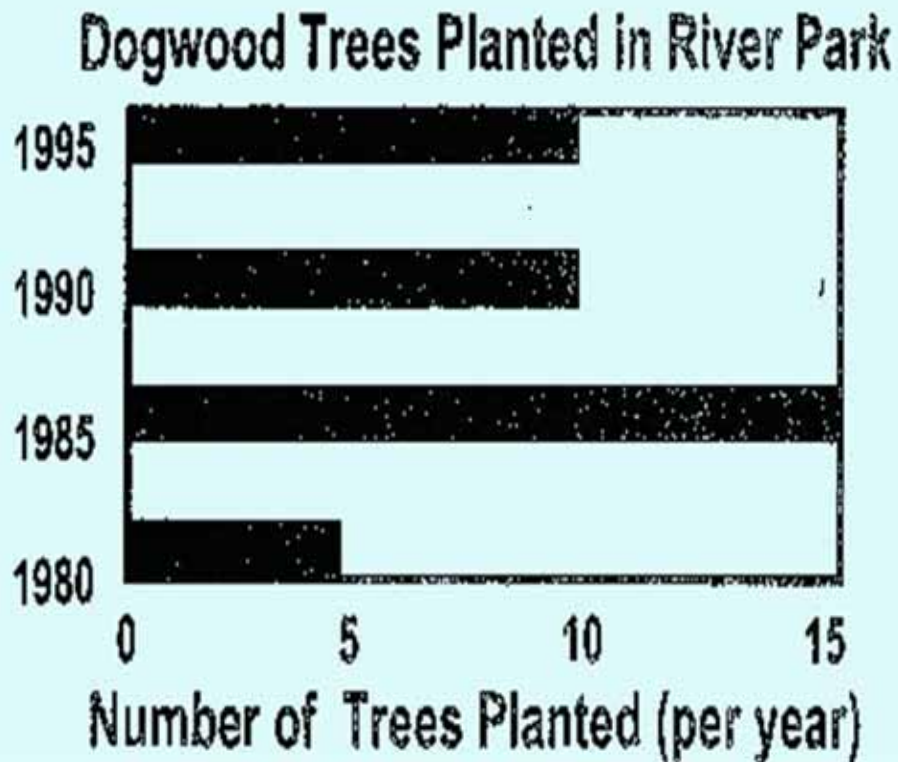
Bell Work, Wednesday, Feb 19, 2014

4. In a previous experiment, Josh determined that the growth of goldfish depends on the size of the container they are in. Now, Josh wants to know if number of goldfish in a container affects the growth of goldfish. **To conduct his experiment, he placed 10 goldfish in a 20 gallon aquarium, 5 goldfish in a 10 gallon aquarium, and 1 goldfish in a 1 gallon aquarium.** All the goldfish received the same food in equal amounts. He recorded goldfish growth over a 10 week period. From his data, he concluded that the more goldfish in an aquarium, the larger they grow. **Why was his conclusion not valid?**

- A. His data was skewed because he should have put the 10 goldfish in the 1 gallon aquarium and the 1 goldfish in the 20 gallon aquarium.
- B** His data was not valid because he failed to control the size of the aquariums equally for all the groups.
- C. His data was valid, but he should not make a conclusion based on just one experiment.
- D. His new experiment assumed the validity of a past experiment.

Bell Work Thursday Feb 20

Copy one graphs on the question side &
the other on the answer side

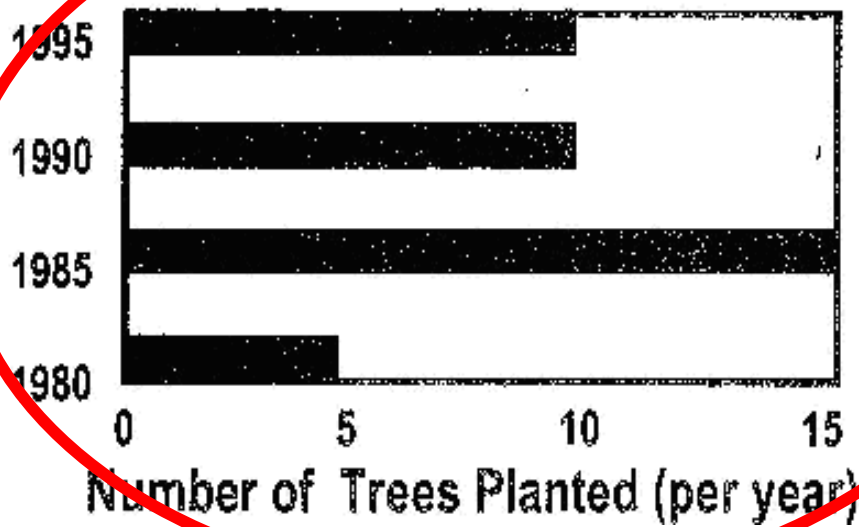


1. How many dogwood trees were in the park in 1997?

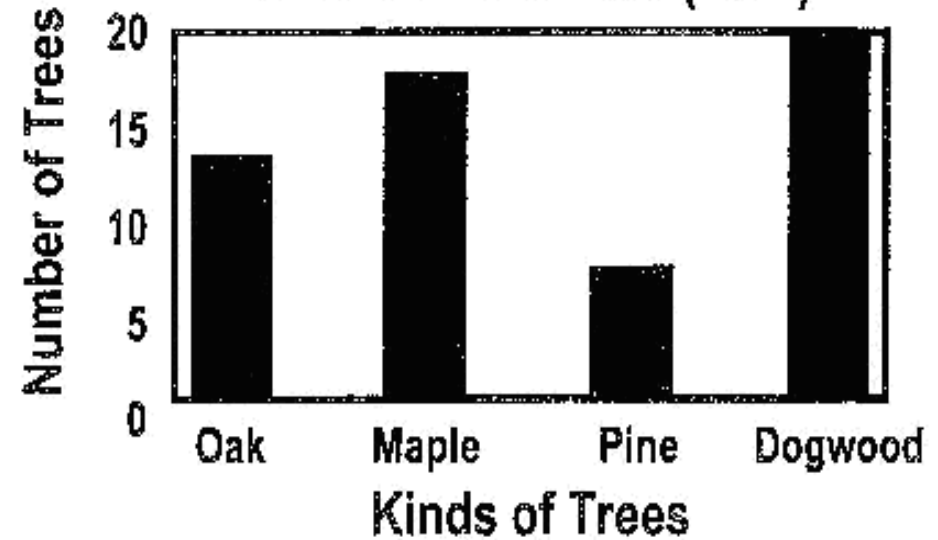
- A. 20 C. 10
B. 15 D. 5

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Dogwood Trees Planted in River Park



Trees in River Park (1997)



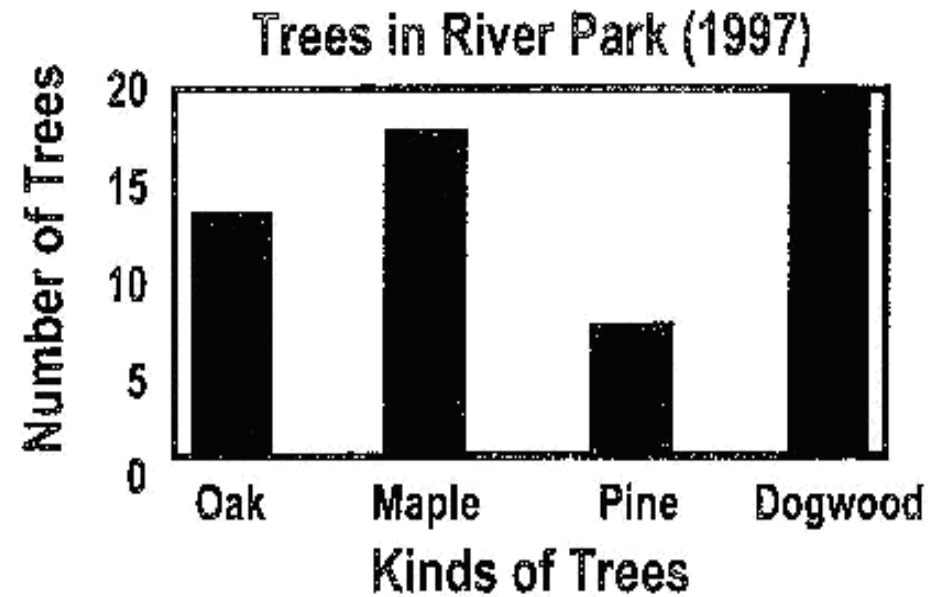
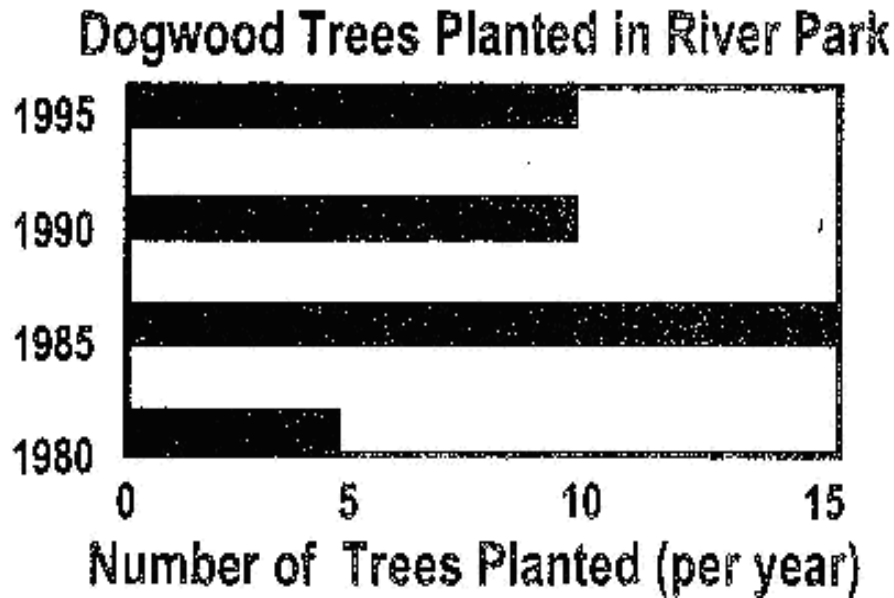
2. What is the total number of dogwood trees planted between 1980 and 1995?

A. 5 C. 30

B. 15 **D. 40**

$$10 + 10 + 15 + 5 = 40$$

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3. What percent total dogwood trees planted remained alive in 1997?

- A. 25 C. 75
B. 50 D. 100

$$\frac{20}{40} \times 100 = 50\%$$