Graphic Features

Lesson 7

Tip #1: Charts and tables display facts in ways that are easy to understand.

- **<u>Cell-</u>** Each box of information in a chart or table.
  - A cell is named by its column and row
- Steps to read a chart or table:
  - Check the title to find out what type of information is being presented.
  - Read the labels to find out what the columns and row represent.
  - Examine the question to determine what specific information you need to find.

Corner Shop Compact Discs
CD Sales by Category (Year to Date)

	January	February	March	April
Rock/Pop	1,792	1,533	1,615	1,399
Jazz	542	720	465	394
Classical	422	398	512	287
Country	695	521	443	312

Row — Column —

Cell

Practice! Practice! Practice!

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Column —

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1. What is the main topic of this table?
   A. The total number of CDs sold during a specific period
   B. The types of CDs available at a store during a four-month period
   C. The number of certain types of CDs bought at a store during a specific period
   D. The number of customers visiting a store during a four-month period

Practice! Practice! Practice!

Corner Shop Compact Discs
CD Sales by Category (Year to Date)

Row —

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— Column

Cell

2. What information is given in Column 4, Row 3?
   A. the number of jazz CDs sold in February
   B. the number of classical CDs sold in April
   C. the number of country CDs sold in January
   D. the total number of CDs sold from January through April

Practice! Practice! Practice!

Corner Shop Compact Discs
CD Sales by Category (Year to Date)

Row —

	January	February	March	April
Rock/Pop	1,792	1,533	1,615	1,399
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— Column

Cell

3. Which type of CD had the fewest sales in March?
- A. rock/pop
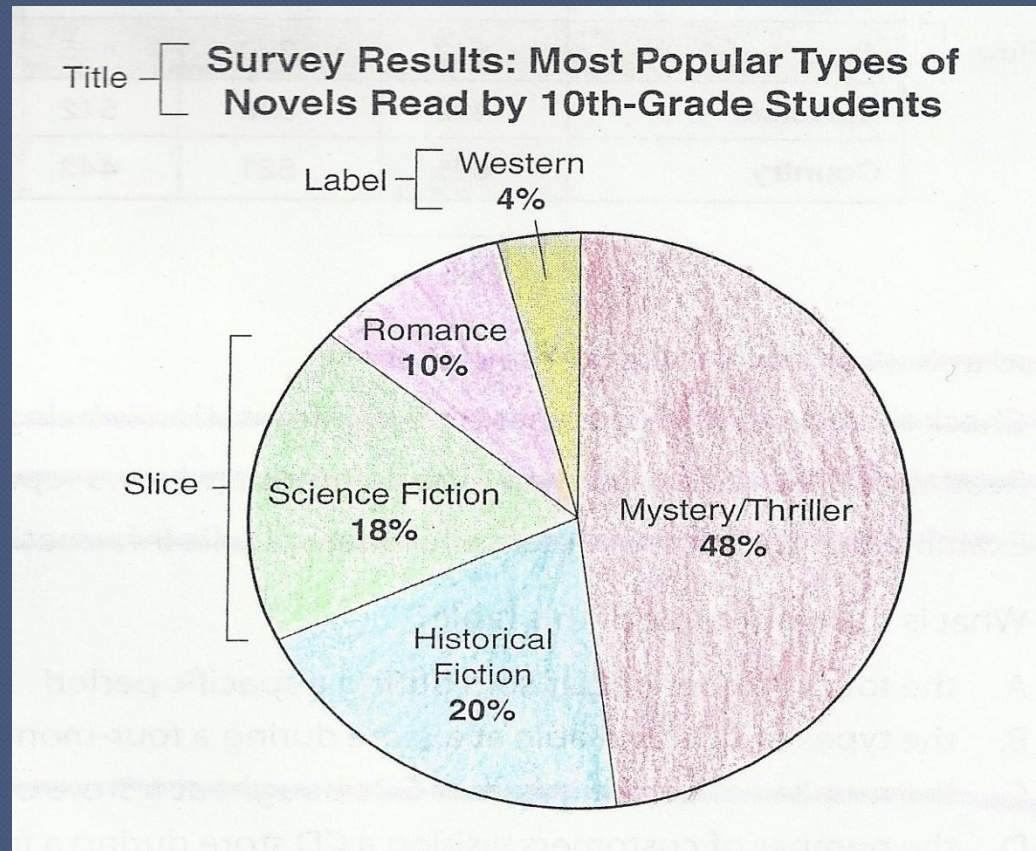- B. jazz
- C. classical
- D. country

Tip #2: Circle graphs show the relationships of portions to a whole.

- **Circle Graph** or **Pie Chart** shows how different parts of something compare to each other and to the whole.
  - Each piece represents a percentage of the whole
  - The pieces always add up to 100 percent.
- Steps to read circle graphs:
  - Check the title to find out what the whole graph represents.
  - Read the labels to find out what each slice represents.
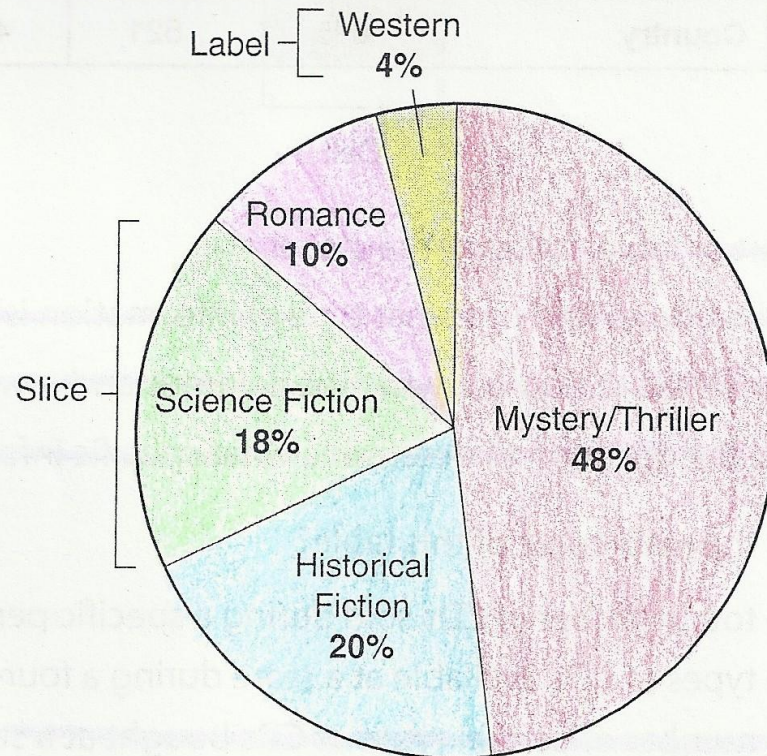 - Examine the questions for make sure you know what you are looking for.

Title — Survey Results: Most Popular Types of Novels Read by 10th-Grade Students

Label — Western 4%

Slice

Romance 10%

Science Fiction 18%

Mystery/Thriller 48%

Historical Fiction 20%

Practice! Practice! Practice!

4. What is the least popular type of novel among tenth-grade students?

    A. Western
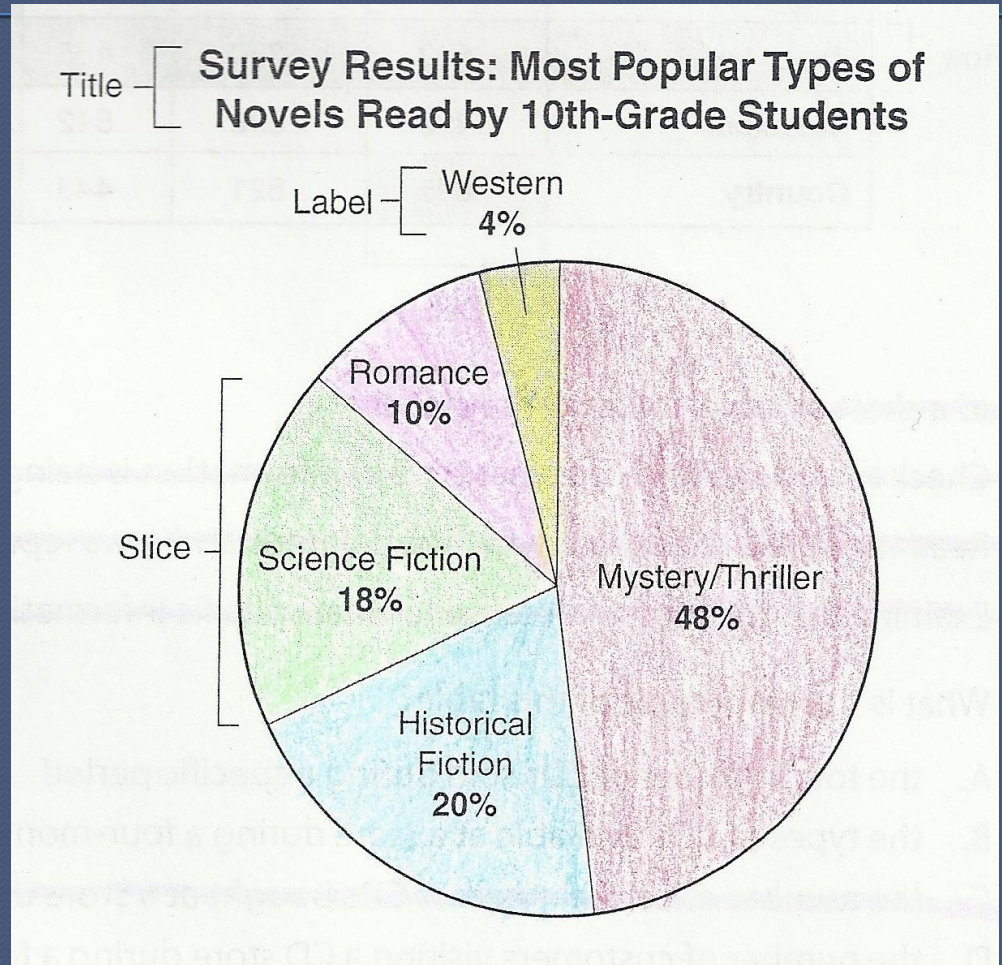   B. Romance
    C. Mystery/thriller
    D. Science fiction

Title — Survey Results: Most Popular Types of Novels Read by 10th-Grade Students

Label — Western 4%

Romance 10%

Slice —

Science Fiction 18%

Mystery/Thriller 48%

Historical Fiction 20%

Practice! Practice! Practice!

5. Which type of novel is the favorite of about half the students?

A. science fiction
B. mystery/thriller
C. historical fiction
D. romance

Title — Survey Results: Most Popular Types of Novels Read by 10th-Grade Students
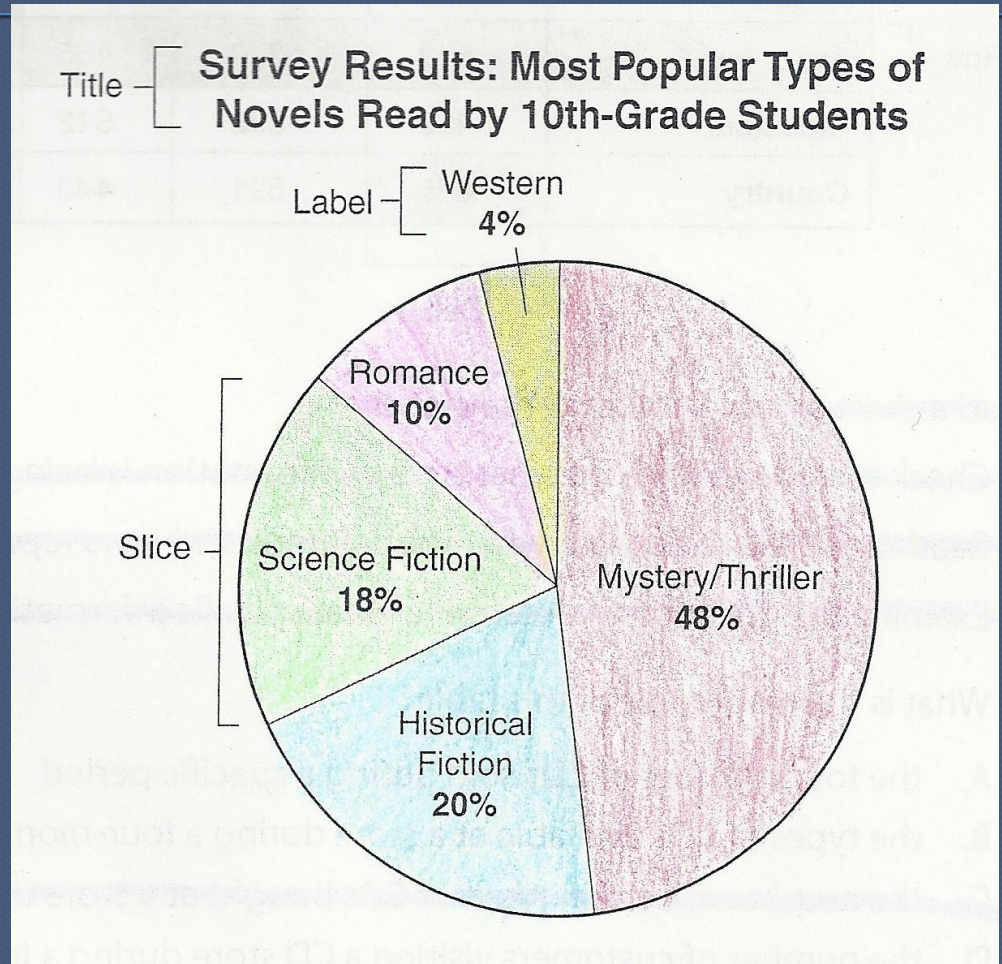
Label — Western 4%

Romance 10%

Slice —

Science Fiction 18%

Mystery/Thriller 48%

Historical Fiction 20%

Practice! Practice! Practice!

6. What percentage of students prefer science fiction?

   A. 4%
   B. 10%
   C. 18%
   D. 48%

Title — Survey Results: Most Popular Types of Novels Read by 10th-Grade Students

Label — Western 4%

Slice

Romance 10%

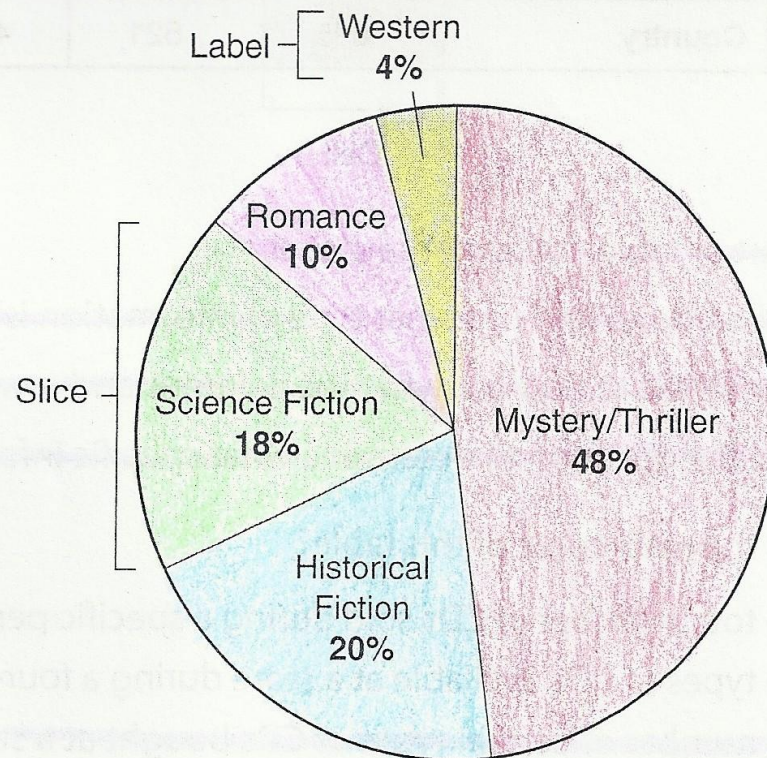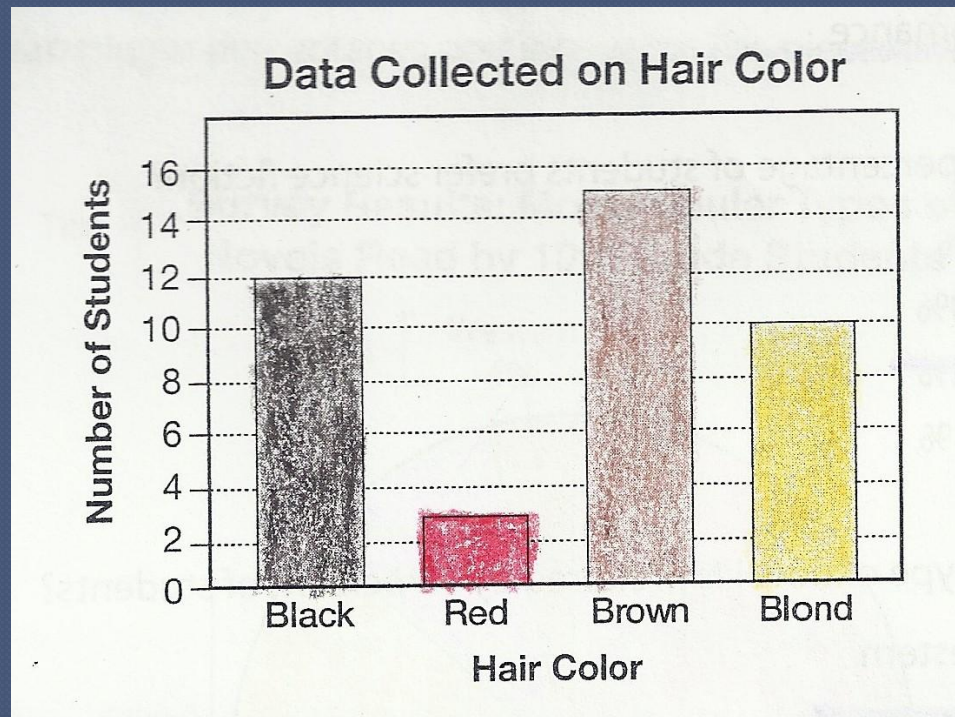Science Fiction 18%

Mystery/Thriller 48%

Historical Fiction 20%

Practice! Practice! Practice!

7. What type of novel is preferred by 10 percent of students?

A. western
B. romance
C. historical fiction
D. science fiction

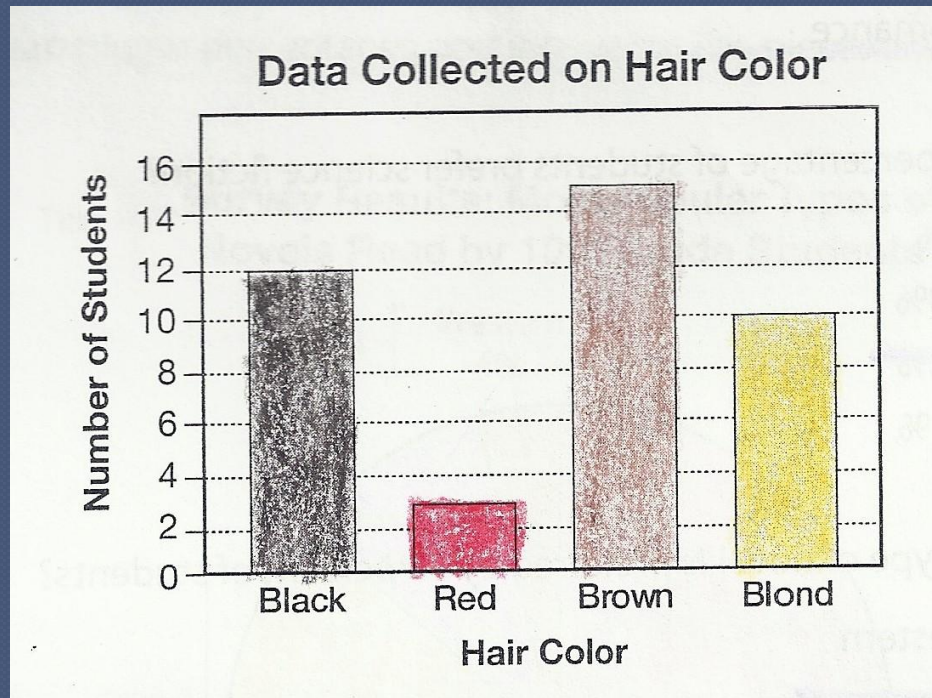Title — Survey Results: Most Popular Types of Novels Read by 10th-Grade Students

Label — Western 4%

Romance 10%

Slice — Science Fiction 18%

Mystery/Thriller 48%

Historical Fiction 20%

Tip #3: Bar graphs compare amounts.

- Bar graphs usually compare related things.
- The information contained in a graph is described by labels on the left side and beneath the graph.
- **Vertical axis**= line on the left
- **Horizontal axis** = line along the bottom
- *Be sure to identify what type of measuring units is being used on each axis.
- Most graphs will show units measured on one axis and the variable on the other.

Data Collected on Hair Color

A bar graph with "Number of Students" on the vertical axis (scaled 0, 2, 4, 6, 8, 10, 12, 14, 16) and "Hair Color" on the horizontal axis (Black, Red, Brown, Blond). Black ≈ 12, Red ≈ 3, Brown ≈ 15, Blond ≈ 10.
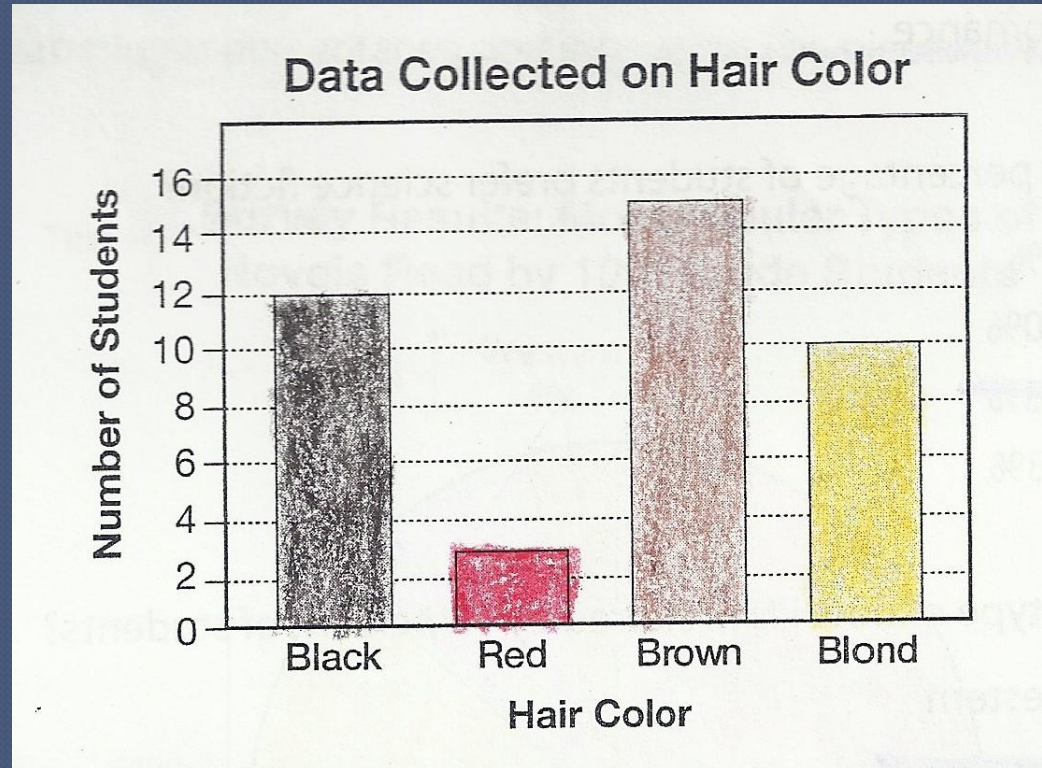
Tip #3: Cont'd

- Steps to read a bar or line graph:
  - Check the title to make sure you understand what kind of information is being presented.
  - Read the labels on each axis.
  - Check the question to make sure you understand what you are looking for in the graph.

Practice! Practice! Practice!

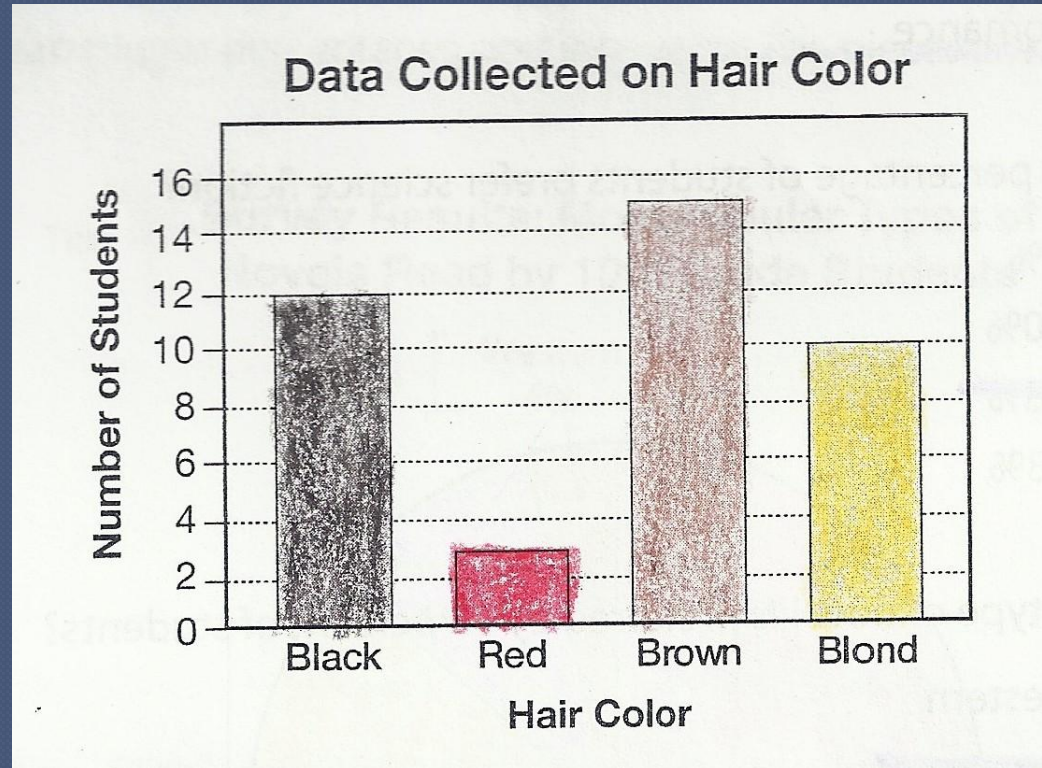8. Which hair color is most common in this group of students?

    A. Black
    B. Red
    C. Brown
    D. Blond

Data Collected on Hair Color

Practice! Practice! Practice!

9. How many students have black hair?
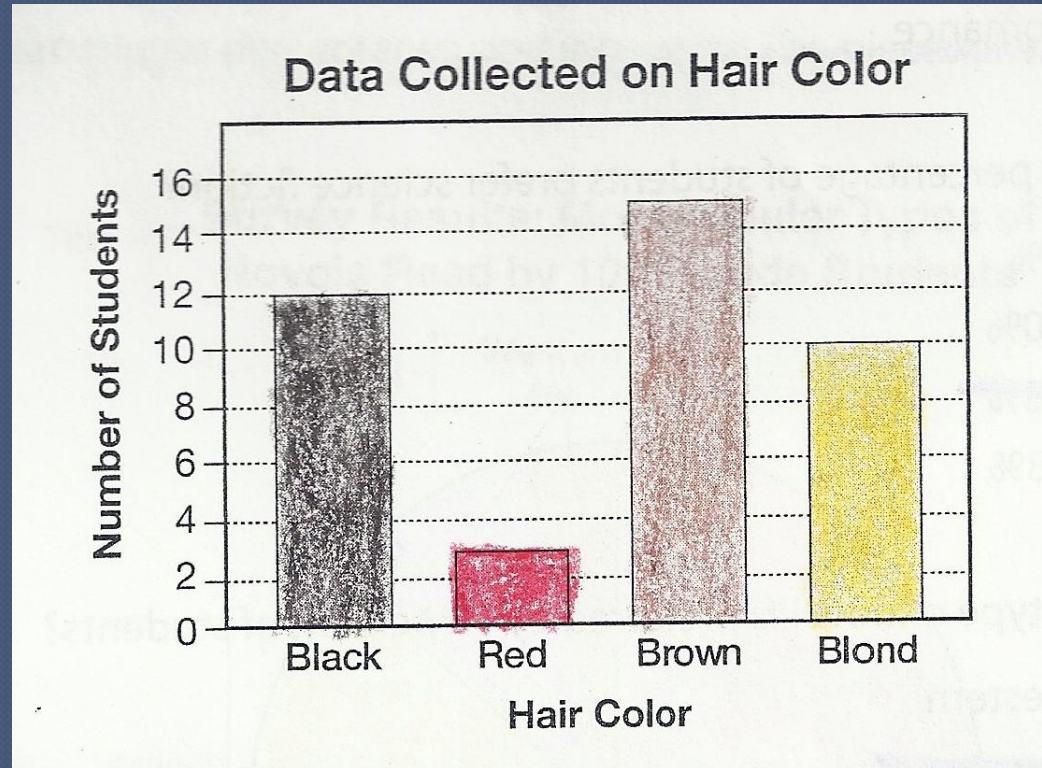
    A. 10
    B. 12
    C. 14
    D. 16

Data Collected on Hair Color

Practice! Practice! Practice!

10. Which hair color is shared by a total of ten students?

    A. Black
    B. Red
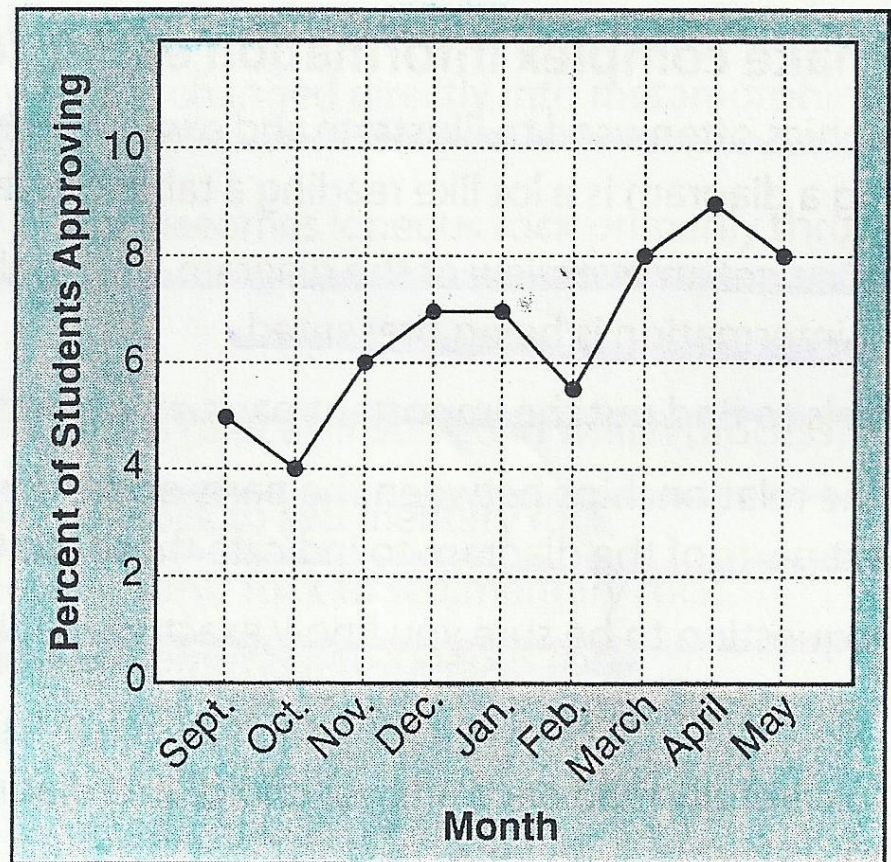   C. Brown
    D. Blond

Data Collected on Hair Color

Tip #4: Line graphs show relationships and changes over time.

- Line graphs are used to show:
  - The relationship between two variables
  - Changes or trends over time

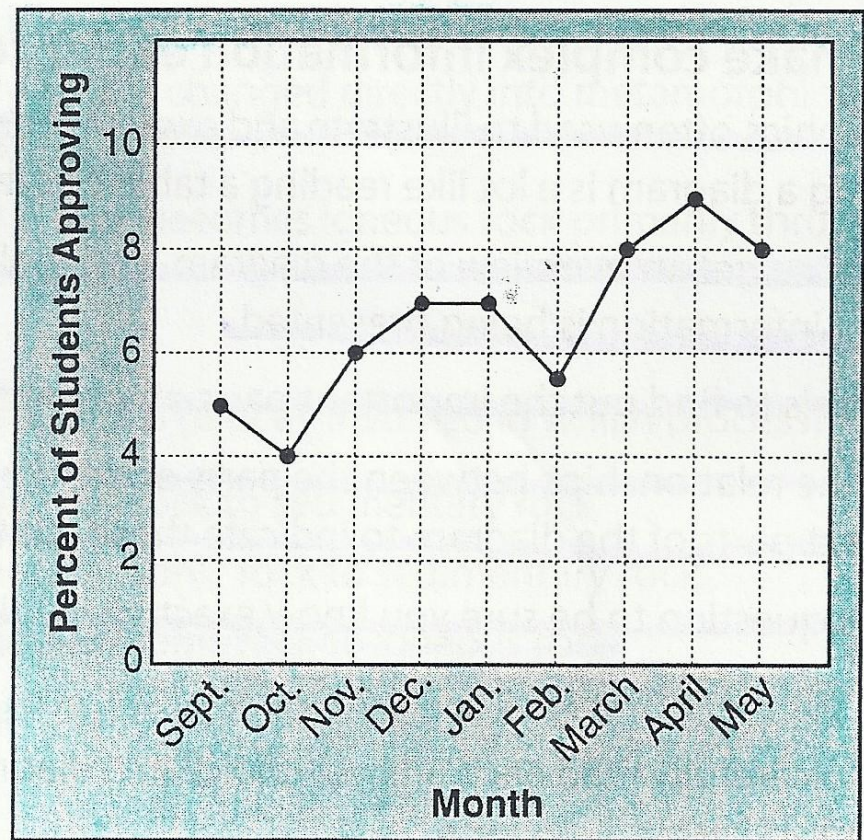Approval Rating of the Cafeteria Food

Practice! Practice! Practice!

11. During which period did the approval rating of the cafeteria food decrease most?

A. September to October
B. January to February
C. February to March
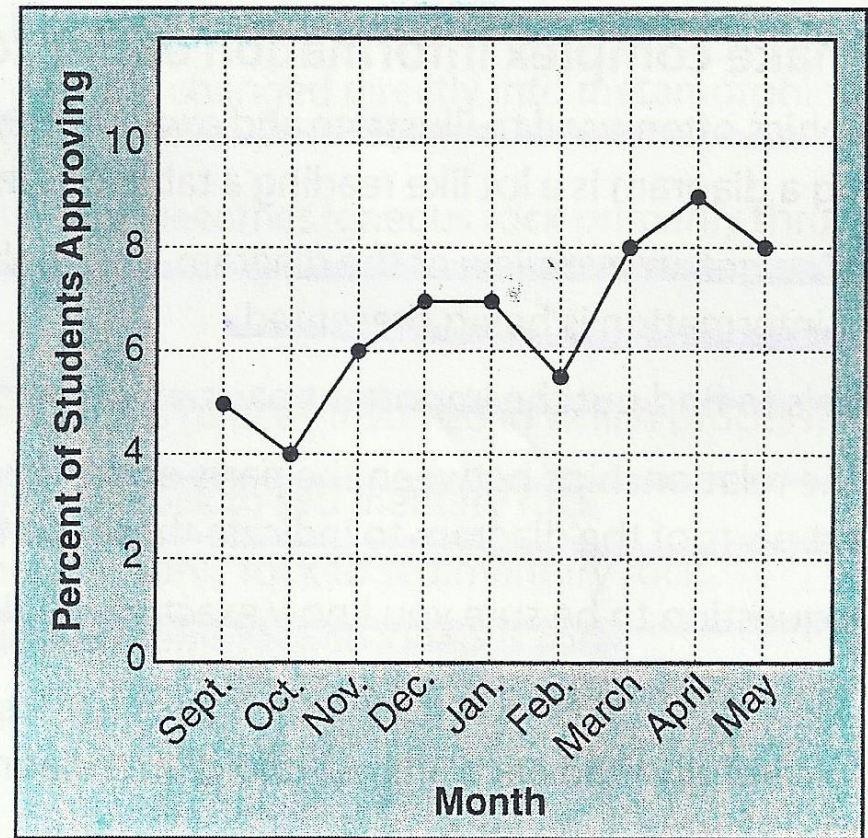D. April to May

Approval Rating of the Cafeteria Food

Practice! Practice! Practice!

12. During which two months was the approval rating at eight percent?

A. September & November
B. November & February
C. December & January
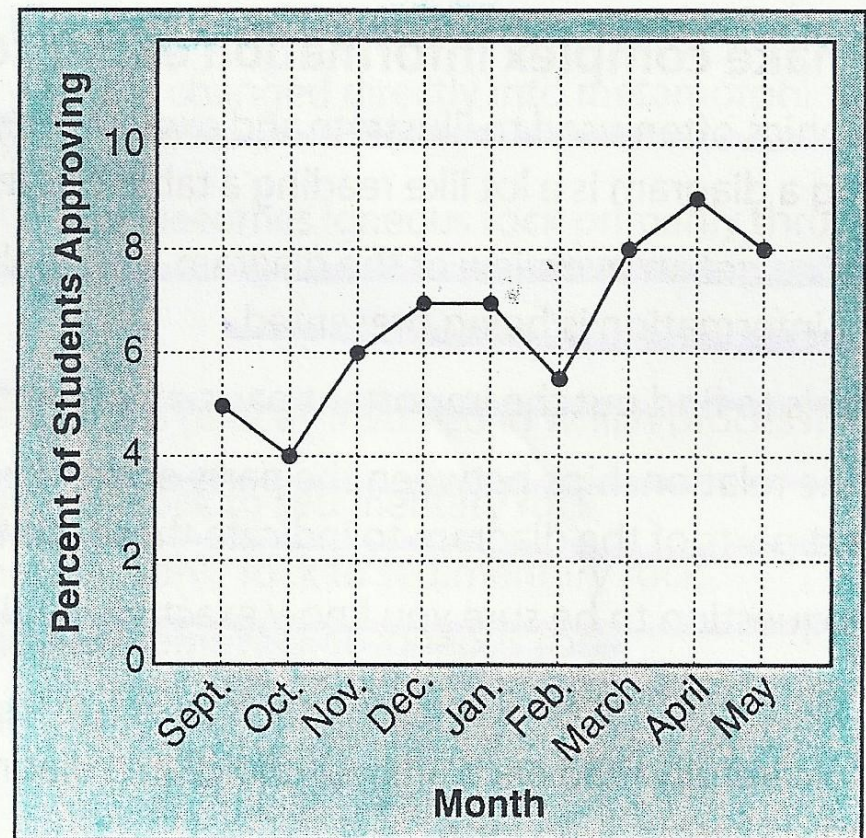D. March & May

Approval Rating of the Cafeteria Food

Practice! Practice! Practice!

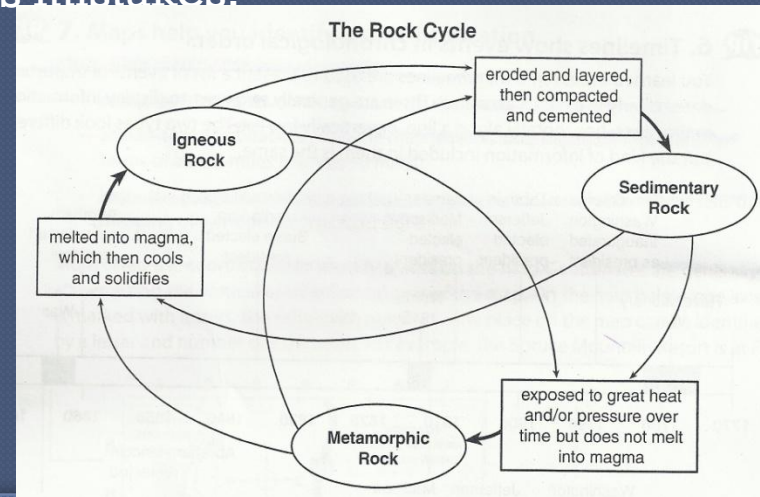13. How can the general approval rating of cafeteria food during the school year best be described?

A. overwhelmingly positive
B. relatively stable
C. increasingly negative
D. increasingly positive

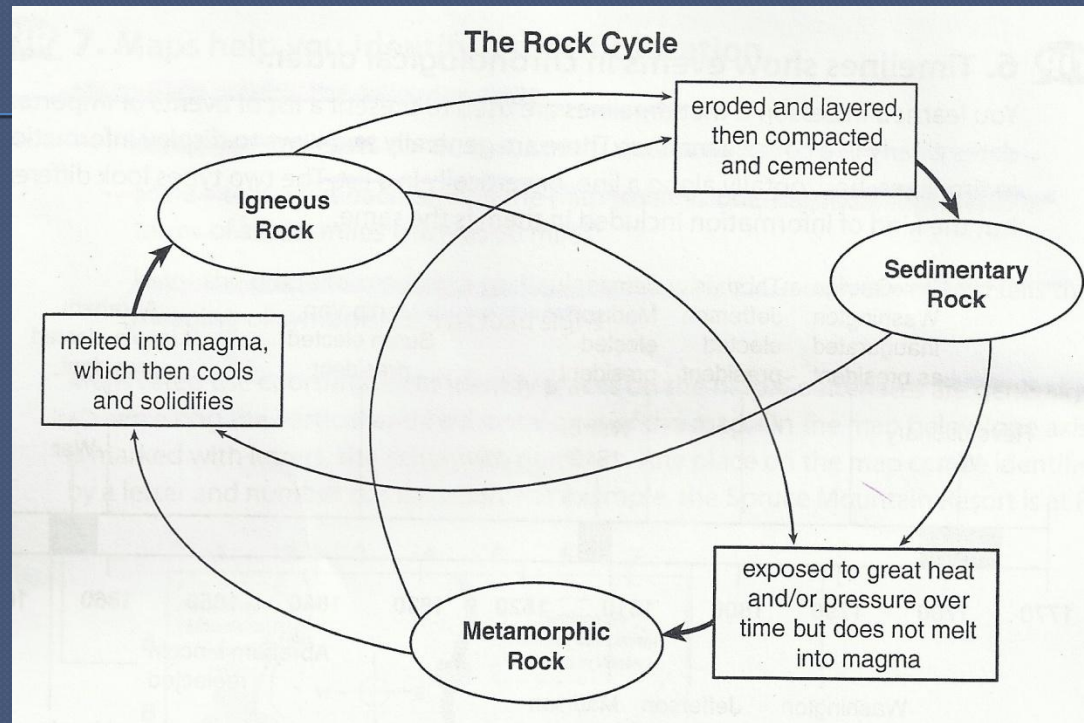Approval Rating of the Cafeteria Food

Tip #5: Diagrams make complex information easier to understand.

- **Diagrams**: graphics often used to illustrate and explain ideas in articles and textbooks.
- Tips for reading diagrams:
  - Read the title to get an overview of the diagrams, and make sure you understand what type of information is being presented.
  - Read the labels to find out the important parts of the diagram.
  - Determine the relationships between the parts of the diagram. Arrows and lines often connect parts of the diagram to indicate these relationships for you.
  - Examine the question to be sure you know exactly what information you need to find.
  - *It is a good idea to carefully read each answer choice in a diagram question to avoid making careless mistakes.
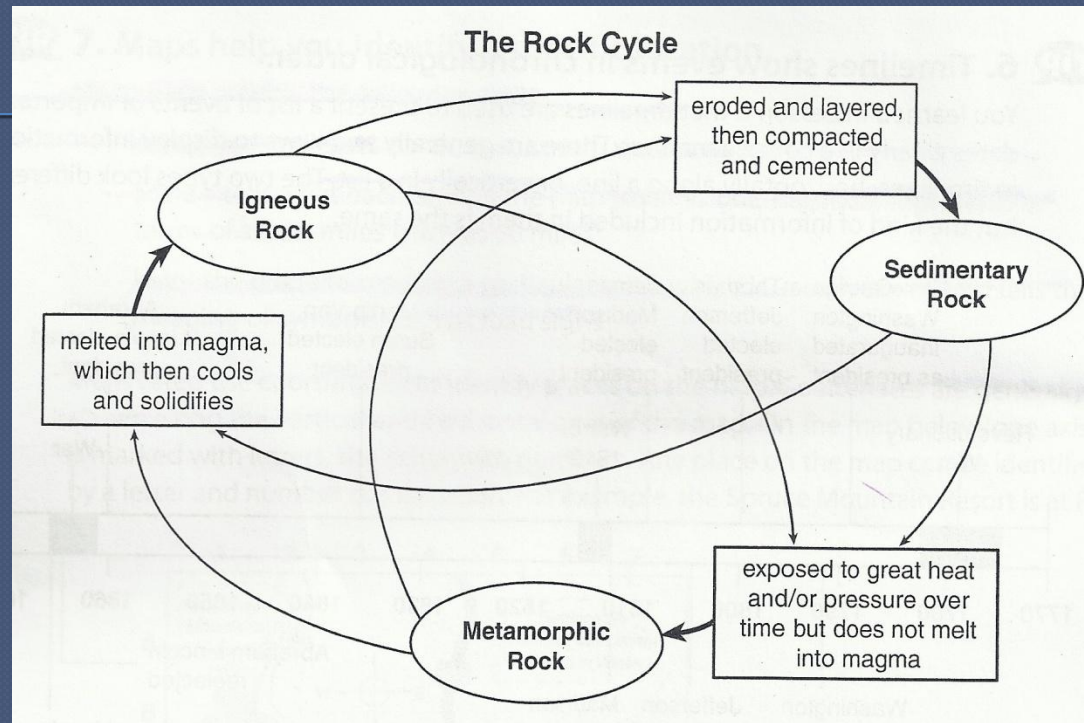
The Rock Cycle

Igneous Rock

eroded and layered, then compacted and cemented

Sedimentary Rock

melted into magma, which then cools and solidifies

exposed to great heat and/or pressure over time but does not melt into magma

Metamorphic Rock
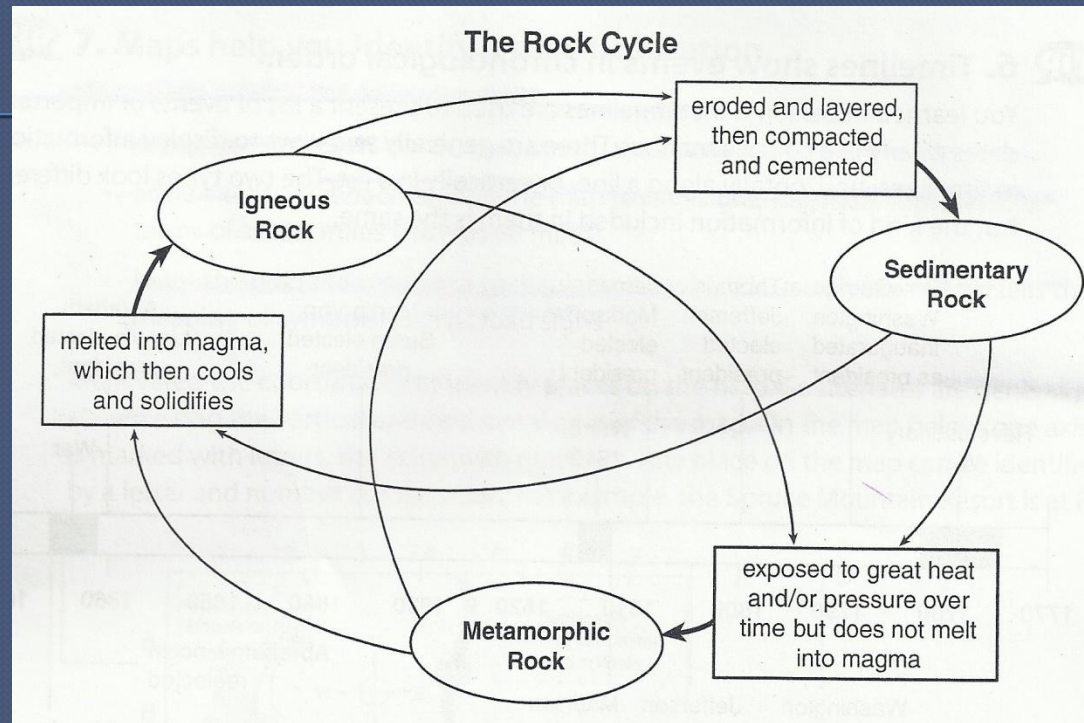
Practice! Practice! Practice!

The Rock Cycle

14. Which statement is correct according to the diagram?
    A. Metamorphic rock can be changed into sedimentary rock through erosion and layering.
    B. Igneous rock becomes metamorphic rock, mostly due to a cooling process.
    C. Sedimentary rock is changed directly into metamorphic rock when magma cools.
    D. Metamorphic rock becomes igneous rock primarily through the process of erosion.

Practice! Practice! Practice!

The Rock Cycle

15. The cooling of magma is directly involved in which process?
   A. changing igneous rock to sedimentary rock
   B. changing metamorphic rock to sedimentary rock
   C. changing metamorphic rock to igneous rock
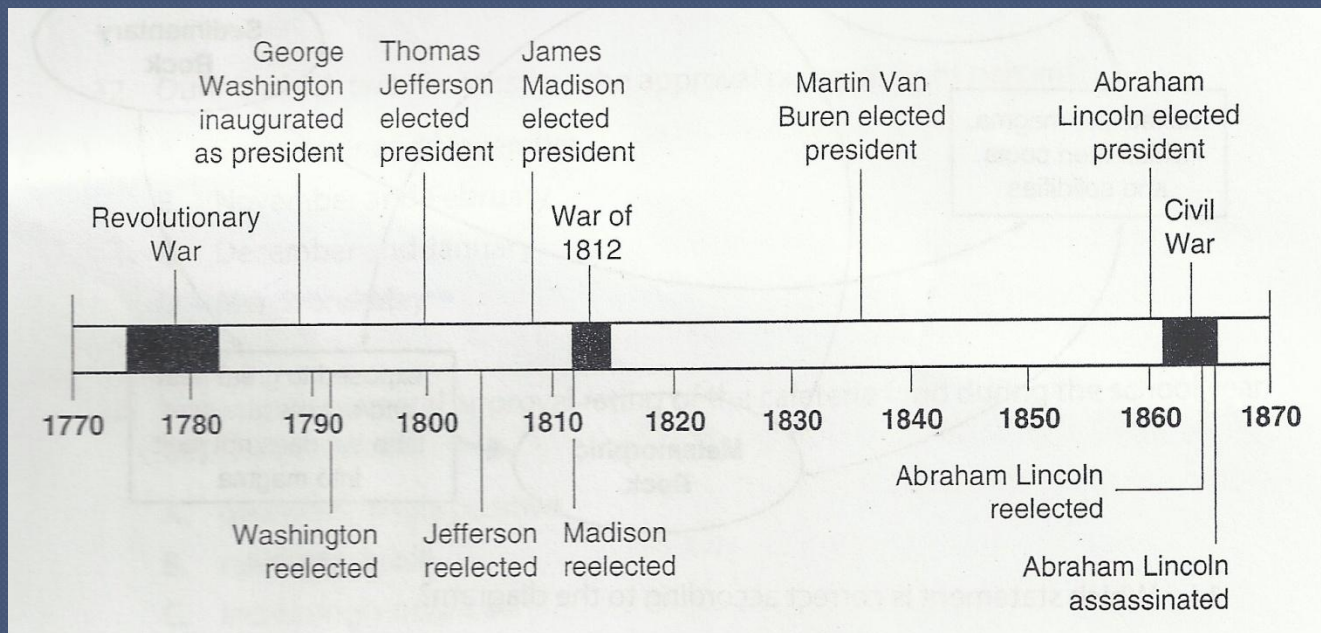   D. changing igneous rock to metamorphic rock

Practice! Practice! Practice!

The Rock Cycle
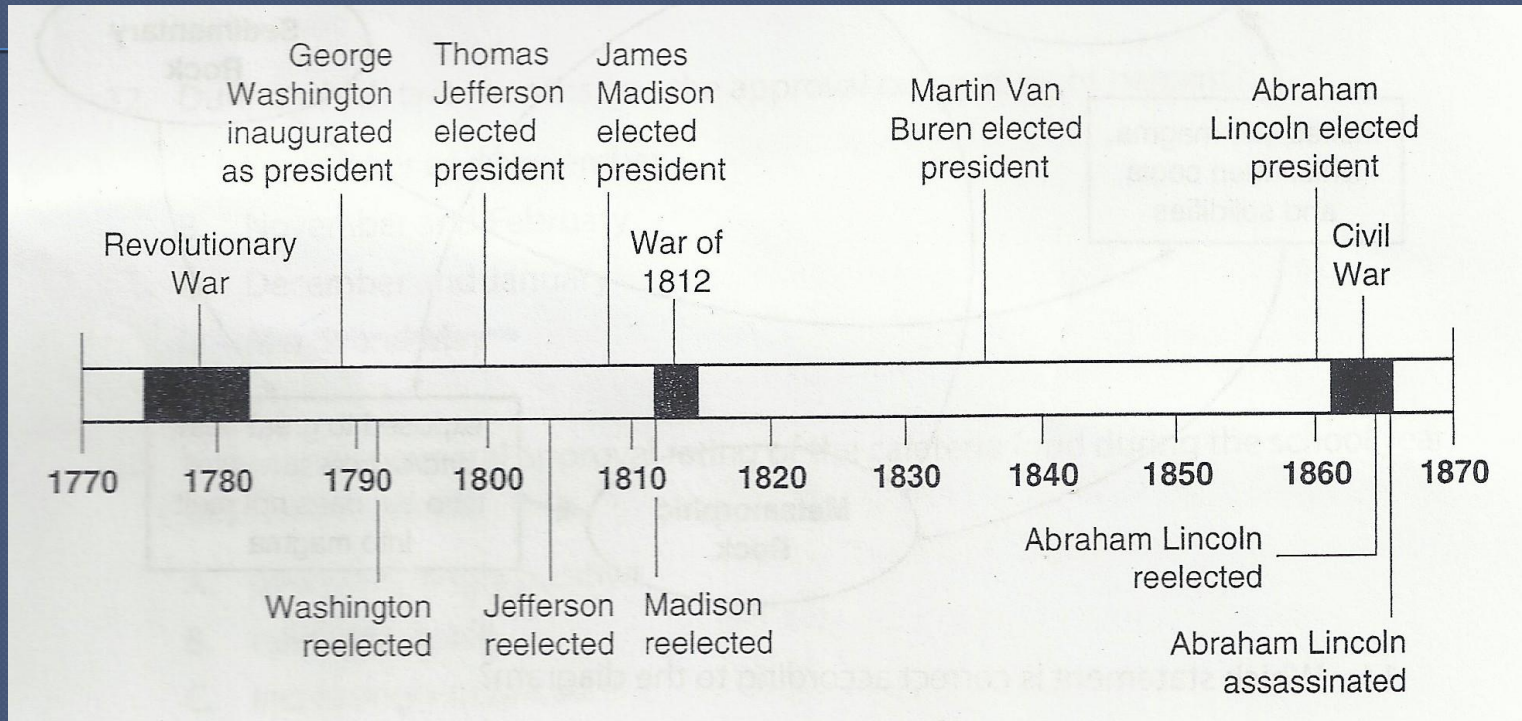

16. Which statement is correct, according to the diagram?
    A. Metamorphic rock can next become either igneous or sedimentary rock.
    B. Magma must become sedimentary rock before it can erode.
    C. Cooling is a factor in changing metamorphic to sedimentary rock.
    D. Pressure is required to change any rock to metamorphic rock.

Tip #6: Timelines show events in chronological order.

- Timelines are used to present a list of events or important dates clearly in a concise manner.
- Timelines may show equal units of time or only significant dates at irregular intervals.
- Two ways to display information:
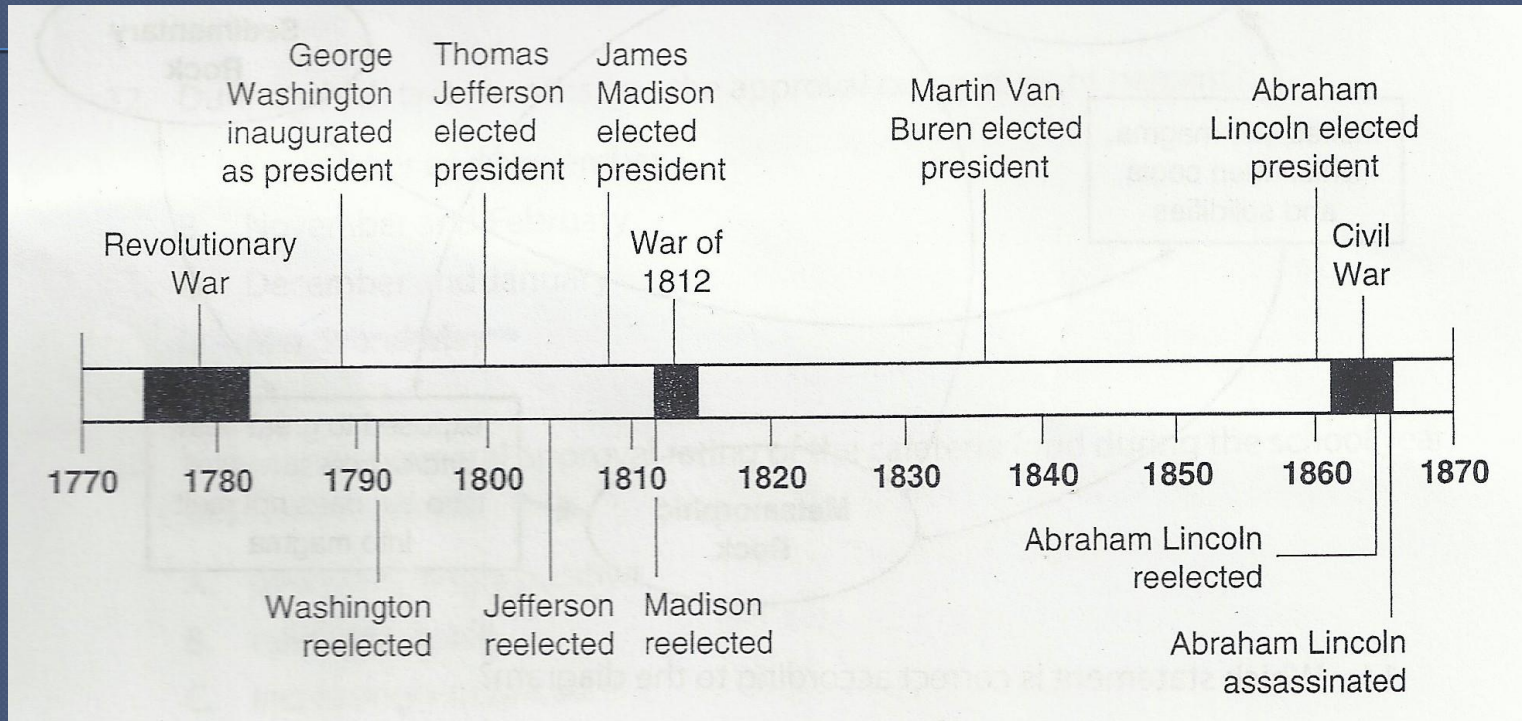 - Horizontally along a line
  - Vertically on a list

	George Washington inaugurated as president	Thomas Jefferson elected president	James Madison elected president		Martin Van Buren elected president		Abraham Lincoln elected president

Revolutionary War

War of 1812

Civil War

1770 1780 1790 1800 1810 1820 1830 1840 1850 1860 1870

Washington reelected

Jefferson reelected Madison reelected

Abraham Lincoln reelected

Abraham Lincoln assassinated

Practice! Practice! Practice!

17. During which war era was James Madison president?
   A. Revolutionary War
   B. War of 1812
   C. Civil War
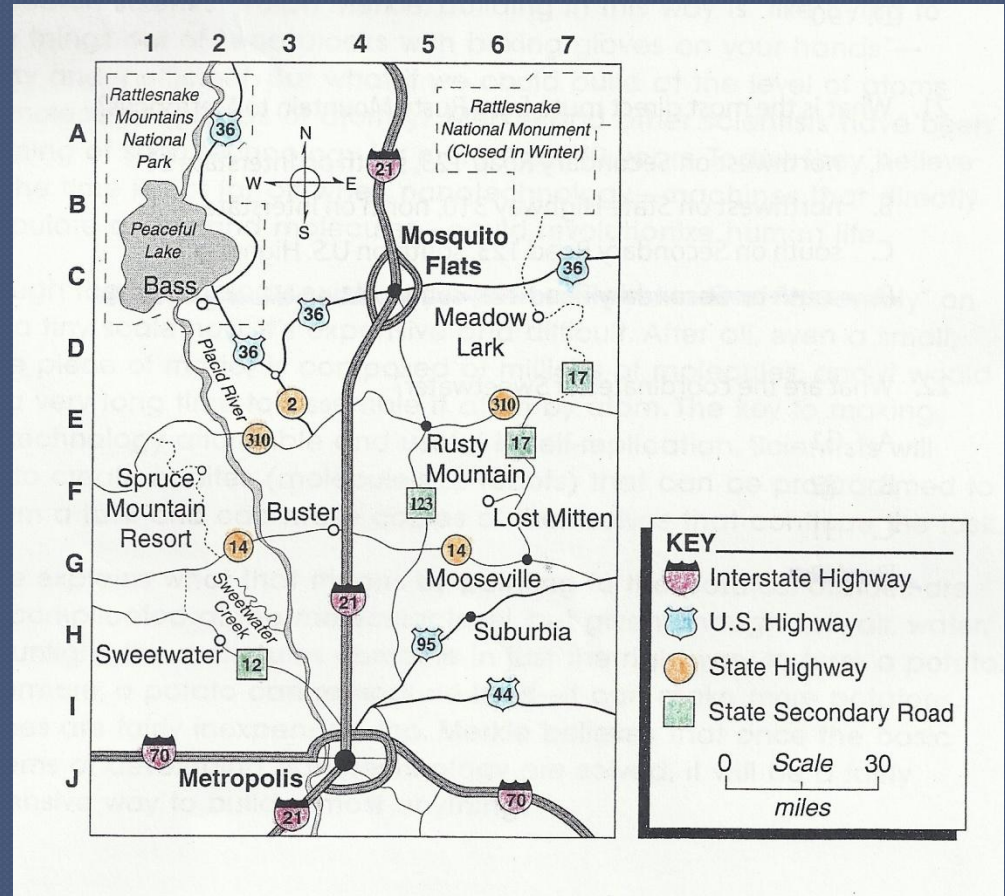   D. Both the Revolutionary War and the War of 1812

Practice! Practice! Practice!

18. About how many years after the end of the Revolutionary War era was Thomas Jefferson first elected president?
A. 5
B. 10
C. 20
D. 30

Tip #7: Maps help you identify a specific location.
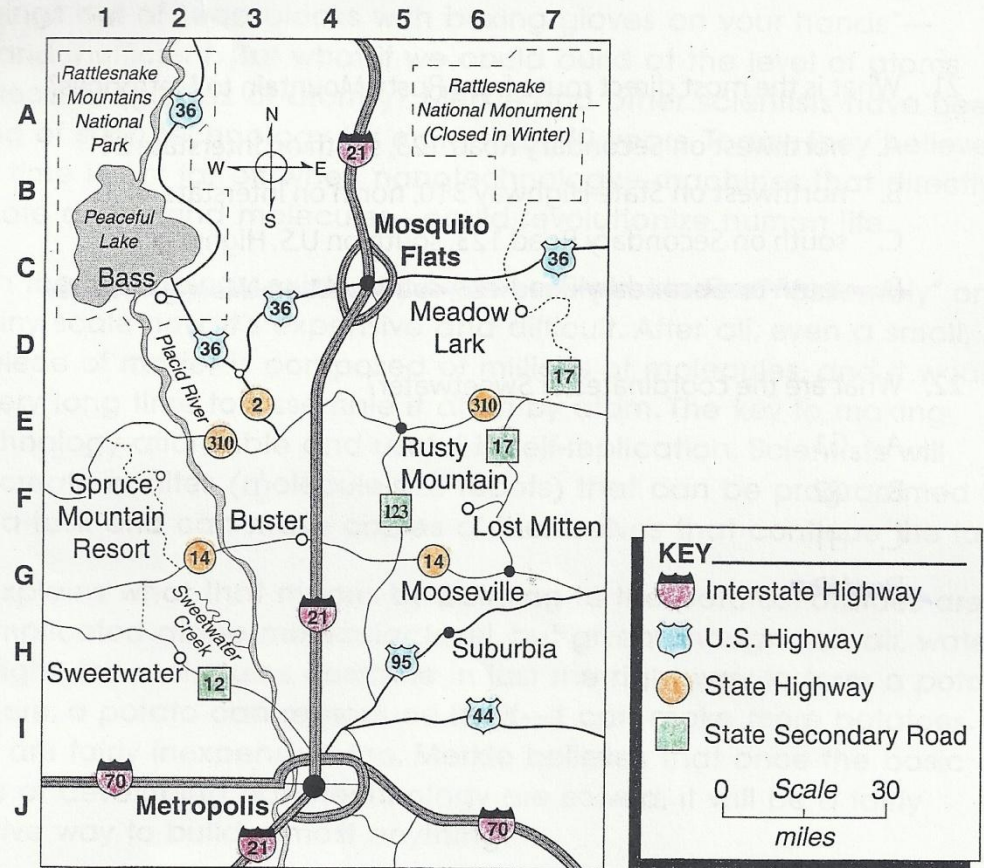
- Most maps provide the following tools:
  - **Compass**: indicates north, east, south, and west
  - **Scale**: tells what each unit on the map represents in terms of actual miles
  - **Key**: the guide to reading a particular map; usually boxed in and tells the meaning of symbols
- Maps often use coordinates to identify places on a map.
  - **Coordinates** are generally shown along the vertical and horizontal axes of the map.

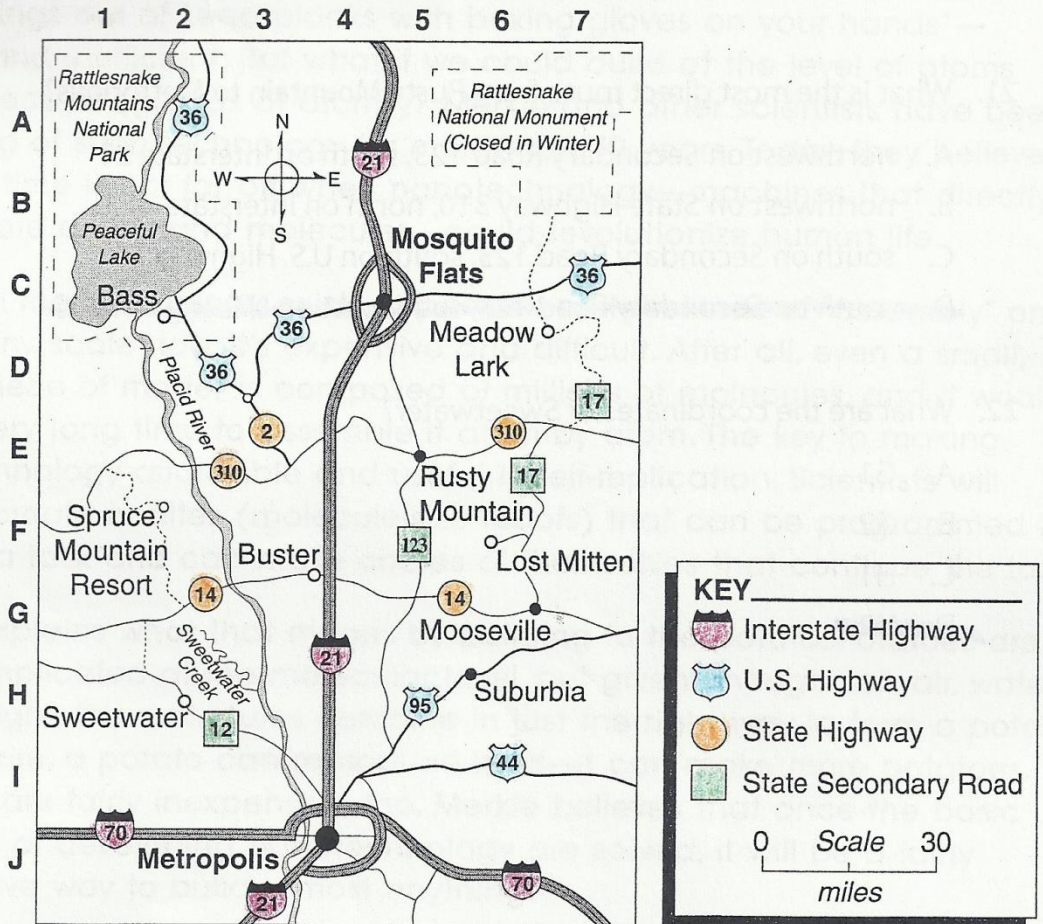19. What is the classification of the road that connects Mosquito Flats to Metropolis?

A. State Highway
B. U.S. Highway
C. Interstate Highway
D. State Secondary Road

Practice! Practice! Practice!

20. The distance by road between Mosquito Flats and Rusty Mountain is about how many miles?
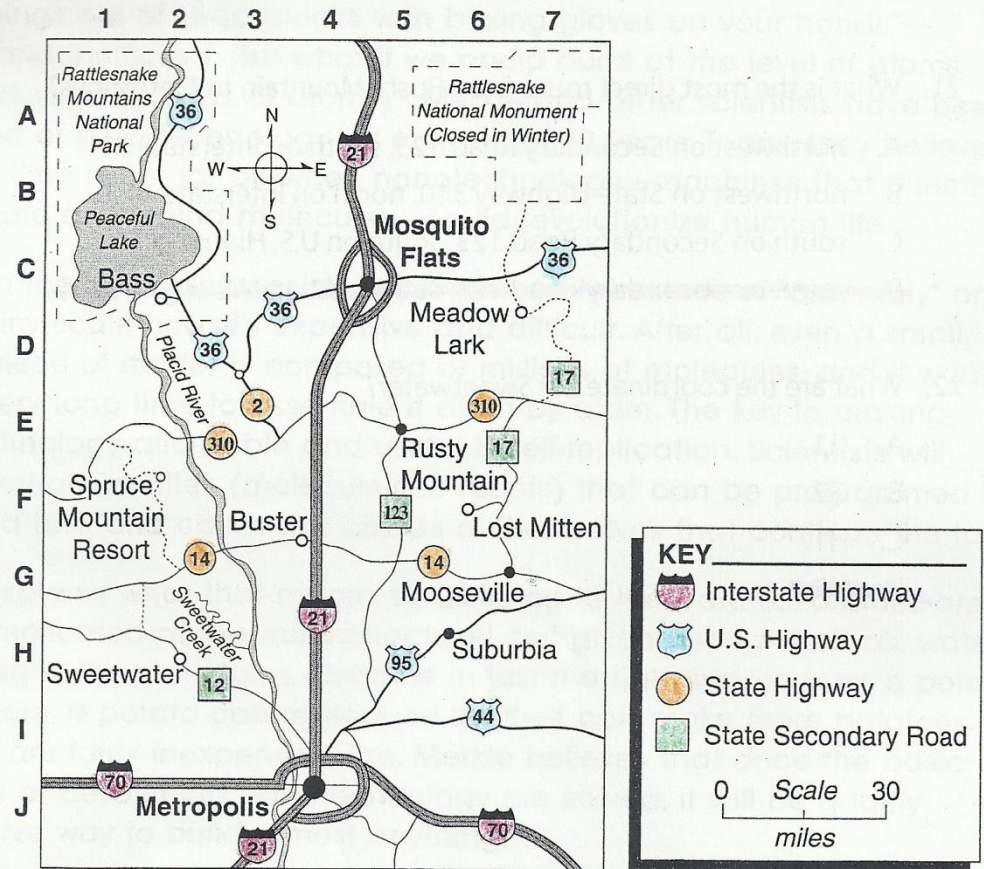
A. 15

B. 30

C. 60

D. 90

Practice! Practice! Practice!

21. What is the most direct route from Rusty Mountain to Metropolis?

A. northwest on Secondary Road 123, south on interstate 21

B. northwest on State Highway 310, north on Interstate 21

C. south on Secondary Road 123, south on U.S. Highway 36

D. south on Secondary Road 123, southwest on U.S. Highway 95

Practice! Practice! Practice!

22. What are the coordinates of Sweetwater?
   A. G1
   B. G2
   C. H1
   D. H2