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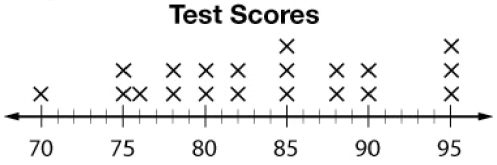
2-5 Line Plots - Practice and Problem Solving

Make a line plot of each set of data.

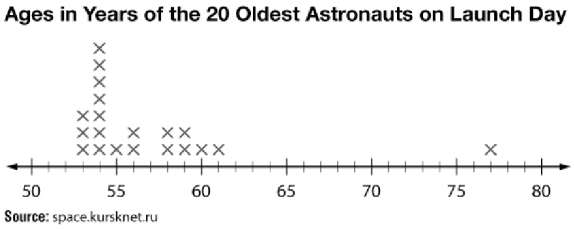
5.

Test Scores			
78	95	80	85
70	88	95	90
95	85	88	78
75	90	85	82
76	75	82	80

Step 1 Draw a number line. The data includes numbers from 70 to 95. So a scale from 70 to 95 is reasonable.
Step 2 Put an × above the number that represents each test score. Add a title.



SPACE SCIENCE Use the line plot below.



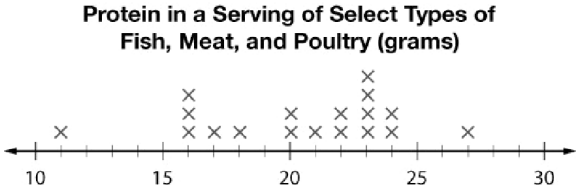
7. How many astronauts were 56 years old on launch day?

2

9. What is the difference between the age of the oldest and youngest astronaut represented in the line plot?

77 – 53 = 24 years

FOOD Use the line plot below.



11. How many more types of fish, meat, and poultry have 23 grams of protein than 17 grams of protein?

4 – 1 = 3

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13. Write one or two sentences that analyze the data.

Sample answer: The majority of meats have 20 to 24 grams of protein. The greatest number of grams of protein on the line plot is 27 grams.

15. ANALYZE GRAPHS Refer to the line plot you made in Exercise 6. Write one or two sentences that analyze the data.

Sample answer: The world's tallest building has 110 stories. Only four buildings on the plot have 100 stories or more.

TRAVEL Use the table at the right that shows the average travel time to work for select cities.

Average Travel Time to Work	
City	Minutes
Anaheim, CA	24
Atlanta, GA	27
Fort Worth, TX	24
New Orleans, LA	24
New York, NY	38
Oakland, CA	29
Omaha, NE	17
Washington, D.C.	29
Source: U.S. Census Bureau	

17. Which display allows you to easily determine the number of cities that have an average commute time of 29 minutes? Explain.

Sample answer: Line plot; you can identify 29 on the number line and simply count the number of ×'s.

19. COLLECT THE DATA Create a line plot that displays the shoe size of students in your class. Then write one or two statements that analyze the data. Identify any peaks or symmetry.

See students' work.

21. CHALLENGE *Clusters* are data that are grouped closely together. Identify the clusters in the following set of data that describe the ages of people in a movie theater.
22, 23, 11, 12, 12, 13, 12, 14, 40, 12, 30, 26

Order the data from least to greatest.
11, 12, 12, 12, 12, 13, 14, 22, 23, 26, 30, 40
There is a cluster between 11 and 13.

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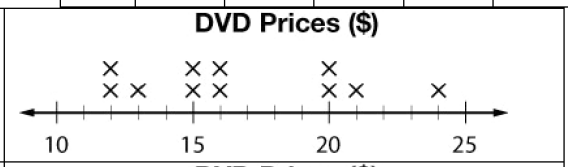
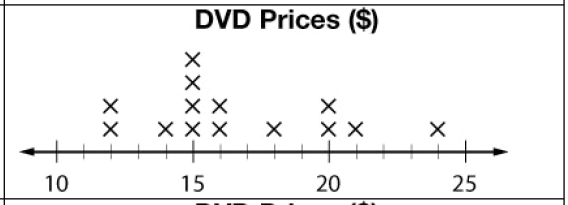
23. The table shows the prices, in dollars, of select DVDs. Which line plot correctly displays the data in the table?

DVD Prices ($)						
24	16	18	14	16	21	15
15	12	15	15	20	20	12

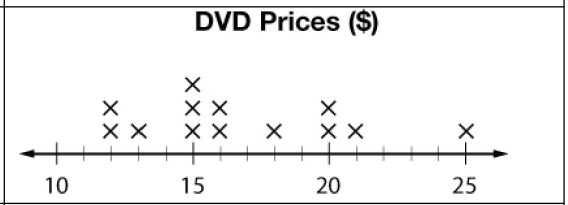
A



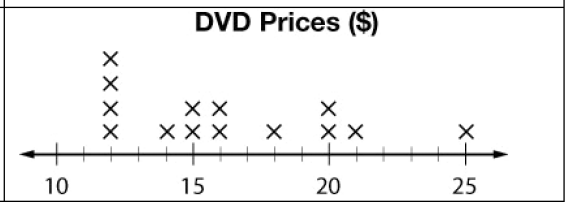
B



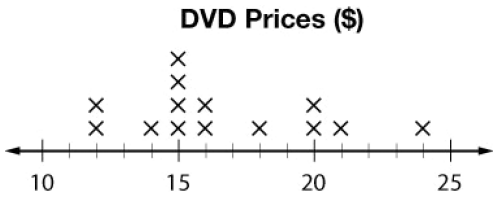
C



D



B;



Make a stem-and-leaf plot of each set of data.

25. Points scored in basketball games: 55, 47, 62, 38, 45, 50, 58, 60, 64, 49, 55, 45, 52

Step 1 Order the data from least to greatest
38, 45, 45, 47, 49, 50, 52, 55, 55, 58, 60, 62, 64
Step 2 Use the tens digits to form the stems and the units digits to form the leaves.
Step 3 Include a key that explains the stems and leaves.
Step 4 Label the plot with a title.

Points Scored	
Stem	Leaf
3	8
4	5 5 7 9
5	0 2 5 5 8
6	0 2 4

4| 5 = 45 points

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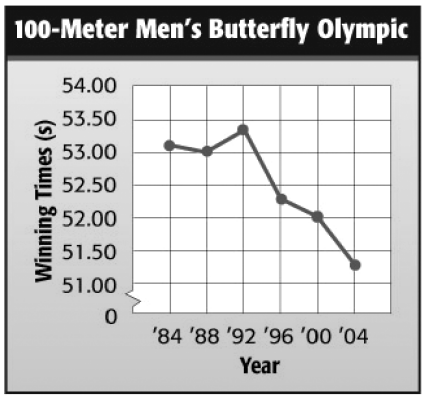
OLYMPICS Use the line graph below.



Source: *The World Almanac*

27. Make a prediction of the winning time in the 2012 Olympics. Explain your reasoning.

49.5 seconds; Based on the trend from 1992 to 2004, the winning time decreased.

PREREQUISITE SKILL Find the value of each expression.

29. $(4 + 8 + 3) \div 3$

$$\begin{aligned}(4+8+3)\div 3 &= (12+3)\div 3\\ &= 15\div 3\\ &= 5\end{aligned}$$