

For full credit, show all your work.

Choose the answers that best match the following measurements.

1.	A quarter would weight about: A a kilogram    B a gram    C a liter    D a milliliter	B
2.	The amount of saline you put on your contact to clean it: A a gram    B a liter    C a kilogram    D a milliliter	D
3.	Your fingernail is about how thick? A a kilometer    B a centimeter    C a liter    D a millimeter	D
4.	The distance from DIS to CSHS is about: A a milliliter    B a kilometer    C a meter    D a centimeter	B

5.-6. Use a **proportion for each conversion** and then determine the answer. Show all work on a separate sheet of paper.

Unit	Convert to...	Unit	Convert to...
128 pints	16 gal	3500 km	3,500,000 m

7.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p align="center"><b>Customary-Metric Conversion Factors</b>                      1 fluid ounce <math>\approx</math> 29.6 milliliters                      1 quart <math>\approx</math> 0.946 liter                      1 gallon <math>\approx</math> 3.79 liters</p> </div> <p>The picnic committee bought 30 liters of lemonade. There were 4 liters left over. How many gallons of lemonade were used at the picnic? (nearest hundredth)</p>	6.86 gal
8.	The committee also brought a 500 milliliter bottle of root beer for Mr. Mangham. How many fluid ounces of root beer did they bring for Mr. Mangham? (nearest hundredth)	16.89 fl. oz.
9.	Popcorn kernels are sold in one-pound bags. If four ounces of kernels make two quarts of popped corn, how many bags of kernels will I need to make ten gallons of popped popcorn?	5
10.	A 2 gallon container is three-fourths full. How many ounces are needed to fill it all the way?	64 oz.

Find the mean, median, mode, and range for the following set of data. Show all work.

11.-14.	44, -60, -60, 85, 20, 85	Mean: 19	Mode: -60, 85
		Median: 32	Range: 145

15.	Mr. Mangham bought 7 tigers for \$580. If he bought one more for \$76, what was the mean cost of the 8 tigers?	\$82
16.	Mr. Underwood is playing a game where the low score wins. The other players had scores of 28, 32, 24, and 35. If Mr. Underwood won the game and the range of scores was 14, what was his score?	21

Use the following data to answer the questions below. Show all work.

Animal	Longevity (years)	Animal	Longevity (years)
Cat	12	Dog	12
Guinea pig	3	Hippo	30
Horse	25	Lion	10
Parakeet	8	Wolf	11
Giant Tortoise	125	Golden Eagle	45
Cow	10	Rabbit	7
Hamster	2	Human	80
Kangaroo	6		

	1 <sup>st</sup> Quartile	3 <sup>rd</sup> Quartile		1 <sup>st</sup> Quartile	3 <sup>rd</sup> Quartile
Left column	4.5	18.5	Right column	10	45

21. Which of the following best describes the shape of the dot plot below?

**Days Between Failure**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

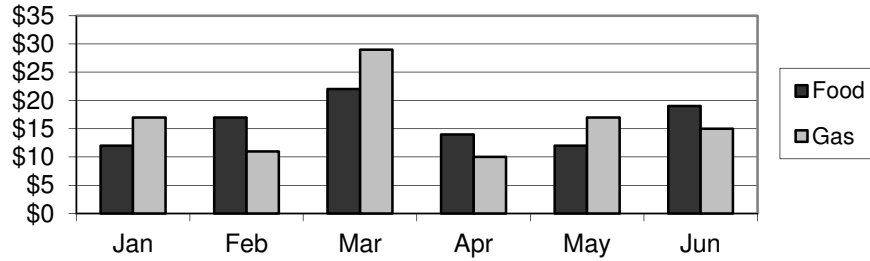
A Skewed left                      C Symmetrical  
 B Skewed right                      D None of the above

B



Use the graph below to answer the following question.

**Money Spent Each Month**



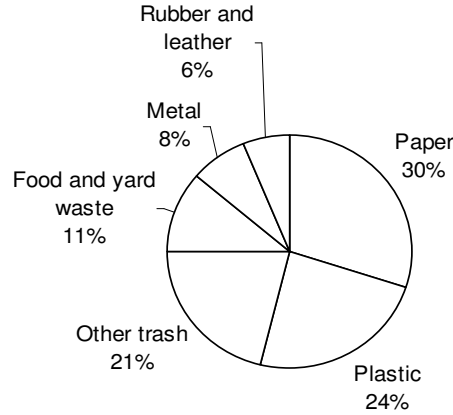
22.	<p>Which statement is best supported by these data?</p> <p>A In January, twice as much money was spent on gas compared to food.          B More money is spent each month on food than gas.          C The largest percent decrease on gas was from March to April.          D The median cost month for food was June.</p>	C
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23.	<p style="text-align: center;"><b>Ages of Club Members</b></p>	5
<p>What is the interquartile range for the Checkers Club?</p>		

24.	<p>In the problem above, which data set shows a greater spread?</p> <p>A Chess Club                      C They have the same spread.          B Checkers Club                  D You cannot tell from the box plots</p>	B
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25.	<p>The list below shows the number of minutes Addison spent reading on each of six days.</p> <p style="text-align: center;">90, 60, 89, 94, 60, 93</p> <p>Which two measures of these data best describe the typical number of minutes Addison spent reading each day?</p> <p>A Mean and mode                      C Mode and range          B Mean and median                    D Median and range</p>	B
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The circle graph below shows the materials in US landfills. Which of the following statements is NOT supported by the graph?



26.

B

- A Paper and other trash make up more than half of US landfills.
- B Rubber and leather and food and yard waste make up  $\frac{1}{4}$  of US landfills.
- C The amount of plastic is triple the amount of metal in US landfills.
- D The amount of paper is more than twice the amount of metal in US landfills.

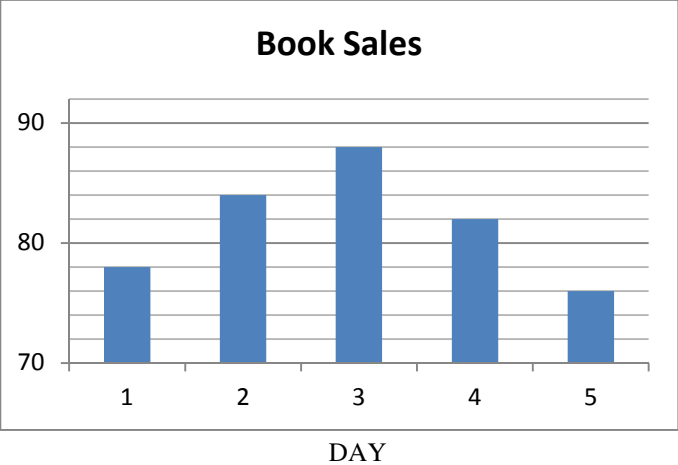
The data in the table below show the number of lunch items sold at a school snack bar in one day. Which statement is best supported by these data?

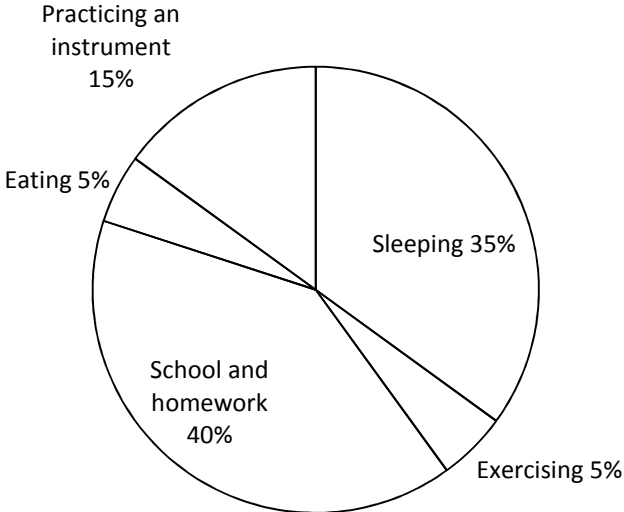
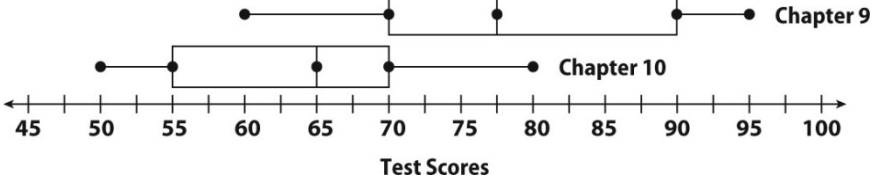
Lunch item	Number sold
Slice of pizza	170
Hamburger	80
Nachos	130
Regular milk	200
Chocolate milk	110

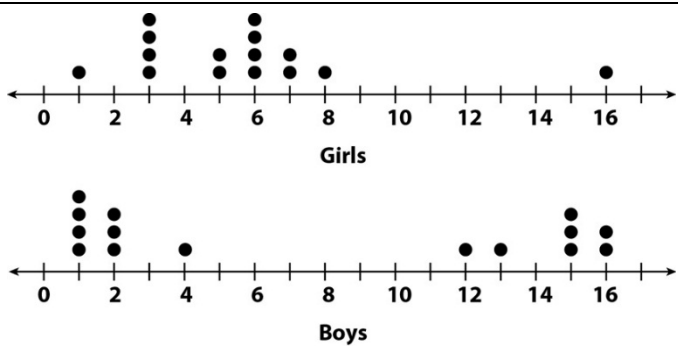
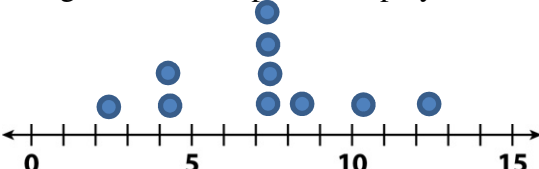
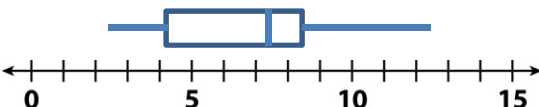
27.

D

- A There are a total of 690 students attending classes at the school.
- B The number of students who bought hamburgers is 50% of the number of students who bought nachos.
- C There are 300 students at the school who do not like hamburgers.
- D The number of students who bought chocolate milk is 55% of the number of students who bought regular milk.

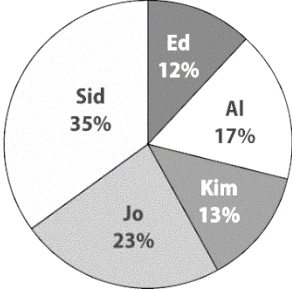
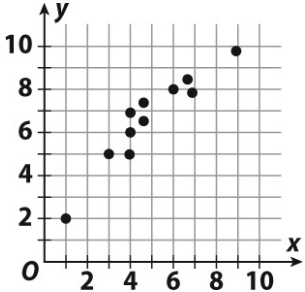
28.	<p>The list below shows Wendy's bowling scores in her last five games.</p> <p style="text-align: center;">112, 123, 136, 145, 159</p> <p>Which measure of data best describes how much these bowling scores varied?</p> <p>A Mean                      B Median                      C Mode                      D Range</p>	D												
29.	<p>Which values are easier to see on a box plot than on a dot plot?</p> <p>A Range B Median C Minimum D Maximum E Mode F Interquartile Range</p>	B F												
30.	<p>The graph below shows the number of books sold at a book fair in 5 days.</p> <div style="text-align: center;">  <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <caption>Book Sales Data</caption> <thead> <tr> <th>Day</th> <th>Number of Books Sold</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>78</td> </tr> <tr> <td>2</td> <td>84</td> </tr> <tr> <td>3</td> <td>88</td> </tr> <tr> <td>4</td> <td>82</td> </tr> <tr> <td>5</td> <td>76</td> </tr> </tbody> </table> </div> <p>Based on the graph, which statement is true?</p> <p>A The number of books sold on Day 3 was twice the number of books sold on Day 1. B The number of books sold on Day 5 was half the number of books sold on Day 2. C The number of books sold on Day 5 was about 93% of the number of books sold on Day 4. D The number of books sold on Day 1 was about 12% of the number of books sold on Day 3.</p>	Day	Number of Books Sold	1	78	2	84	3	88	4	82	5	76	C
Day	Number of Books Sold													
1	78													
2	84													
3	88													
4	82													
5	76													

31.	<p>Ted created a graph to show the percentages of time he spends on different activities during a school day.</p> <p style="text-align: center;"><b>Ted's Activities</b></p>  <p>Ted concluded from the graph that he spends about 48 hours at school and doing homework during a five-day school week. Which statement about Ted's conclusion is true?</p> <p>A Ted's conclusion is invalid because <math>\frac{1}{4}</math> of 120 is 30.          B Ted's conclusion is invalid because 40% of 24 is 9.6.          C Ted's conclusion is valid because 40% of 120 is 48.          D Ted's conclusion is valid because <math>\frac{1}{4}</math> of 192 is 48.</p>	C
32.	 <p>Which test had a larger median and by how much?</p>	Ch. 9 12.5
33.	<p>Which test has a larger spread based on the interquartile range?          Which test has a larger spread based on the range?</p>	Ch. 9 Ch. 9
34.	<p>Marisol graphed a scatter plot of the number of hours she rode her bicycle (<math>x</math>) and the distance traveled (<math>y</math>). She drew the trend line and calculated its equation to be <math>y = 10x + 4</math>.</p> <p>What is the predicted distance Marisol rode her bicycle if she rode for 2.5 hours?</p>	29

35.	 <p>The dot plots compare the number of raffle tickets sold by boys and girls during a school fund-raiser. Which plot has an outlier?</p> <p>A Girls B Boys C Both plots D Neither plot</p>	A										
36.	<p>In the problem above, what is the difference between the medians for the two data sets?</p> <p>A 0 tickets B 2 tickets C 4 tickets D 6 tickets</p>	B										
37.	<table border="1" data-bbox="652 877 1070 993"> <thead> <tr> <th>Children's Ages</th> </tr> </thead> <tbody> <tr> <td>7, 4, 7, 7, 2, 10, 12, 8, 7, 4</td> </tr> </tbody> </table> <p>The data set shows the ages of a random sample of children under 14 who live in an apartment building. Make a dot plot to display the data.</p> 	Children's Ages	7, 4, 7, 7, 2, 10, 12, 8, 7, 4									
Children's Ages												
7, 4, 7, 7, 2, 10, 12, 8, 7, 4												
38.	<p>Make a box plot to display the data in the problem above.</p> 											
39.	<p>In the problem above, what is the median age?</p>	7										
40.	<p>What is the range for the data shown in the stem-and-leaf plot below?</p> <table border="1" data-bbox="592 1638 909 1848"> <thead> <tr> <th>Stem</th> <th>Leaves</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>1 2 3 4 4 5</td> </tr> <tr> <td>3</td> <td>1 3 5 5 9</td> </tr> <tr> <td>4</td> <td>0 1 2 8 8 9</td> </tr> <tr> <td>5</td> <td>0 1 4 4 7</td> </tr> </tbody> </table> <p>Key: 2   1 means 21</p>	Stem	Leaves	2	1 2 3 4 4 5	3	1 3 5 5 9	4	0 1 2 8 8 9	5	0 1 4 4 7	36
Stem	Leaves											
2	1 2 3 4 4 5											
3	1 3 5 5 9											
4	0 1 2 8 8 9											
5	0 1 4 4 7											





46.	<p>In a club election, 200 votes were cast. The circle graph below shows the results.</p>  <p>How many votes did Jo get?</p>	46												
47.	<p>Wally recorded the length in inches of 10 newborn babies at the hospital. The results are shown in the table below. What is the mean absolute deviation for length of a newborn baby?</p> <table border="1" data-bbox="513 699 1003 798"> <tr> <td>20</td> <td>22</td> <td>19</td> <td>24</td> <td>23</td> </tr> <tr> <td>18</td> <td>21</td> <td>24</td> <td>25</td> <td>22</td> </tr> </table> <p>A 1.8 in.      B 2.2 in.      C 3.6 in.      D 21.8 in.</p>	20	22	19	24	23	18	21	24	25	22	A		
20	22	19	24	23										
18	21	24	25	22										
48.	<p style="text-align: center;"><b>Harry's Hamburger Sales</b></p> <table border="1" data-bbox="427 921 1088 1115"> <thead> <tr> <th>Shop</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td><b>Total Orders in Sample</b></td> <td>200</td> <td>100</td> <td>50</td> </tr> <tr> <td><b>Total Cheeseburgers</b></td> <td>80</td> <td>40</td> <td>30</td> </tr> </tbody> </table> <p>Harry owns three hamburger shops. He analyzed a random sample of sales from each of his shops to determine what proportion of his customers order cheeseburgers. Which of the samples above would be the most reliable to use for this study?</p>	Shop	A	B	C	<b>Total Orders in Sample</b>	200	100	50	<b>Total Cheeseburgers</b>	80	40	30	A
Shop	A	B	C											
<b>Total Orders in Sample</b>	200	100	50											
<b>Total Cheeseburgers</b>	80	40	30											
49.	<p>In the problem above, if the total sales at each shop are 600 orders, how many cheeseburgers are sold at each shop?</p>	240, 240, 360												
50.	<p>Which of the following is <b>not</b> shown on the scatter plot below?</p>  <p>A a cluster      C positive association B negative association      D an outlier</p>	B												