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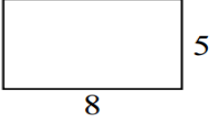
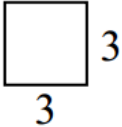
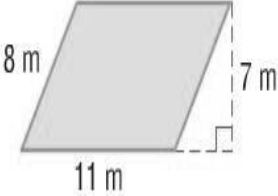
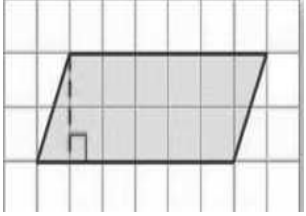
\* لتحميل كتب جميع المواد في جميع الفصول للـ الصف السادس اضغط هنا

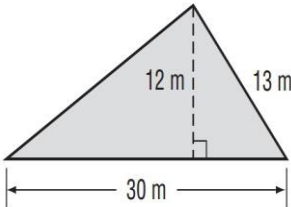
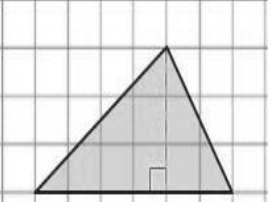
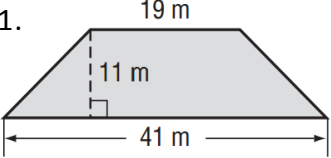
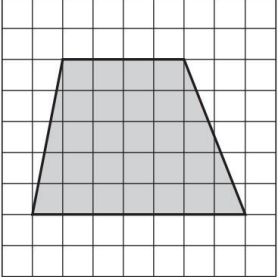
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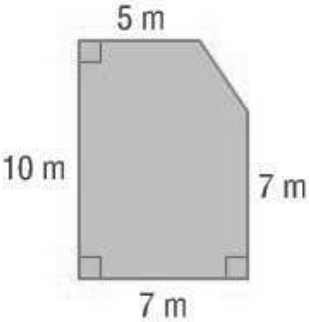
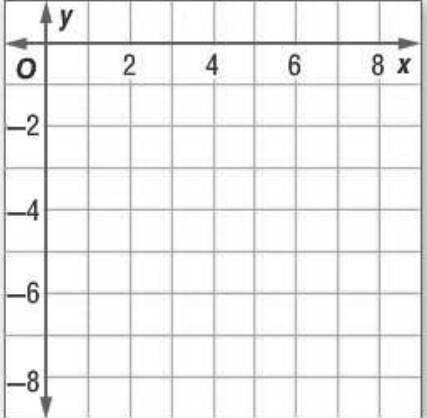
للتحدث إلى بوت المناهج على تلغرام: اضغط هنا

[https://t.me/almanahj\\_bot](https://t.me/almanahj_bot)

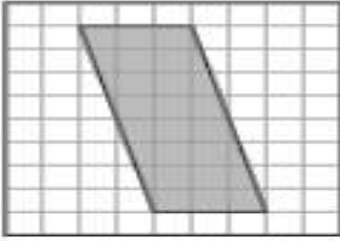
# Area

Rectangles and Squares	Parallelograms
<ul style="list-style-type: none"> <li>Remember to use square units</li> <li>Rectangle: <math>A = lw</math></li> </ul>  <ul style="list-style-type: none"> <li>Square: <math>A = s^2</math></li> </ul> 	$A = bh$ <p>1. </p> 

Triangles	Trapezoids
$A = \frac{bh}{2}$ <p>1. </p> <p>2. </p>	$A = \frac{1}{2}h(b_1 + b_2)$ <p>1. </p> <p>2. </p>

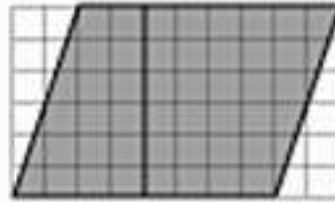
Composite Figures	The Coordinate Plane
<ul style="list-style-type: none"> <li>Break up the figure into shapes that you recognize, then find the area of those shapes and add them together.</li> </ul> 	<ul style="list-style-type: none"> <li>Graph the figure, then find its area.</li> </ul> <p>R(3, -2), S(7, -2), T(8, -6), V(1, -6)</p> 

1. Find the area of the parallelogram



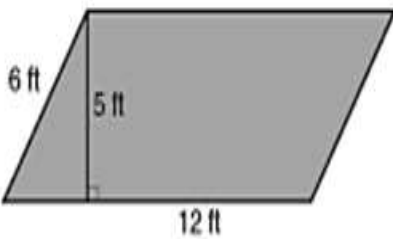
- A.  28 units<sup>2</sup>
- B.  16 units<sup>2</sup>
- C.  24 units<sup>2</sup>
- D.  32 units<sup>2</sup>

2. Find the area of the parallelogram



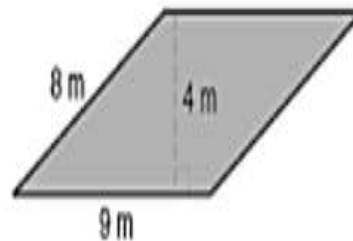
- A.  64 square units
- B.  48 square units
- C.  14 square units
- D.  28 square units

3. Find the area of the parallelogram



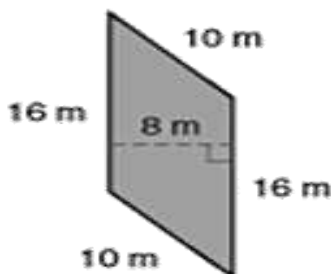
- A.  60 ft<sup>2</sup>
- B.  36 ft<sup>2</sup>
- C.  12 ft<sup>2</sup>
- D.  30 ft<sup>2</sup>

4. Find the area of the parallelogram



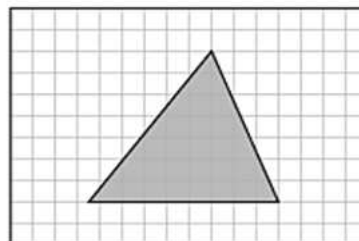
- A.  16 m<sup>2</sup>
- B.  36 m<sup>2</sup>
- C.  13 m<sup>2</sup>
- D.  81 m<sup>2</sup>

5. Find the area of the parallelogram.



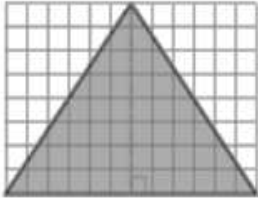
- A.  160 square meters
- B.  80 square meters
- C.  128 square meters
- D.  256 square meters

6. Find the area of the triangle



- A.  14.875 units<sup>2</sup>
- B.  29.75 units<sup>2</sup>
- C.  59.5 units<sup>2</sup>
- D.  119 units<sup>2</sup>

7. Find the area of the triangle

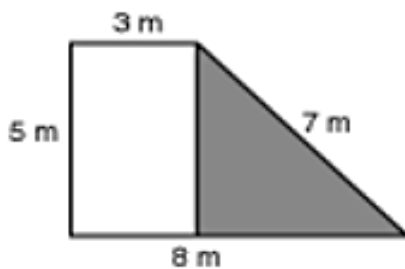


- A.  48 square units
- B.  96 square units
- C.  20 square units
- D.  28 square units

8. Find the area of a triangle with base 18 feet and height 6 feet

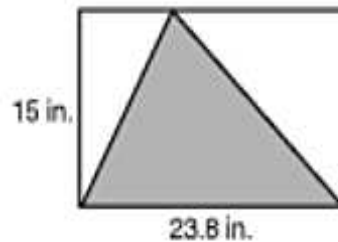
- A.  24 square feet
- B.  27 square feet
- C.  54 square feet
- D.  108 square feet

9. Find the area of the *shaded* region.



- A.  56 square meters
- B.  12.5 square meters
- C.  40 square meters
- D.  23 square meters

10. Find the area of the *shaded* region.



- A.  178.5 square inches
- B.  225 square inches
- C.  357 square inches
- D.  77.6 square inches

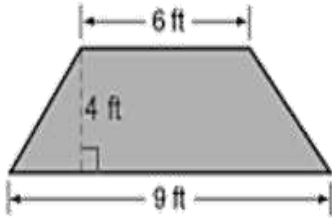
11. Find the area of a trapezoid with bases 3 inches and 8 inches and height 4 inches

- A.  44 in<sup>2</sup>
- B.  35 in<sup>2</sup>
- C.  11 in<sup>2</sup>
- D.  22 in<sup>2</sup>

12. Find the area of a trapezoid with bases 5 mm and 9 mm and height 19 mm

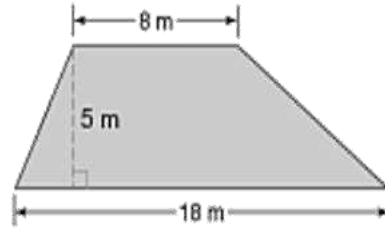
- A.  153 mm<sup>2</sup>
- B.  133 mm<sup>2</sup>
- C.  266 mm<sup>2</sup>
- D.  33 mm<sup>2</sup>

13. Find the area of the figure



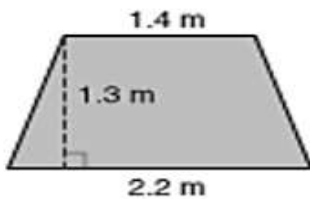
- A.  42 ft<sup>2</sup>
- B.  60 ft<sup>2</sup>
- C.  30 ft<sup>2</sup>
- D.  36 ft<sup>2</sup>

14. Find the area of the figure.



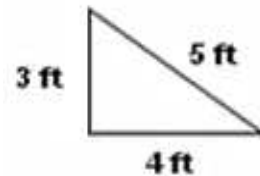
- A.  65 m<sup>2</sup>
- B.  90 m<sup>2</sup>
- C.  130 m<sup>2</sup>
- D.  40 m<sup>2</sup>

15. Find the area of the trapezoid below



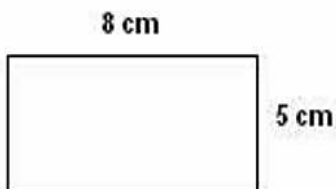
- A.  2.00 m<sup>2</sup>
- B.  4.68 m<sup>2</sup>
- C.  2.34 m<sup>2</sup>
- D.  1.17 m<sup>2</sup>

16. Each side length of the triangle is doubled. What is the perimeter of the new figure?



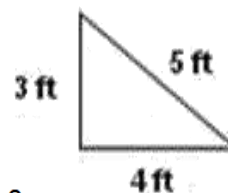
- A.  36 ft
- B.  48 ft
- C.  24 ft
- D.  12 ft

17. Each side length of the triangle is doubled. What is the area of the new figure?



- A.  104 cm
- B.  416 cm
- C.  52 cm
- D.  208 cm

18. Each side of the rectangle is multiplied by 4. What is the perimeter of the new figure?



- A.  192 ft<sup>2</sup>
- B.  48 ft<sup>2</sup>
- C.  24 ft<sup>2</sup>
- D.  96 ft<sup>2</sup>

**19.** A rectangle has vertices  $A(1, 6)$ ,  $B(6, 6)$ ,  $C(6, 3)$  and  $D(1, 3)$ . What is the dimensions of the rectangle?

- A.  3 units by 3 units
- B.  5 units by 3 units
- C.  5 units by 2 units
- D.  5 units by 4 units

**20.** A rectangle has vertices  $A(1, 6)$ ,  $B(6, 6)$ ,  $C(6, 3)$  and  $D(1, 3)$ . What is the perimeter of the rectangle?

- A.  16 units
- B.  12 units
- C.  15 units
- D.  18 units

**21.** A rectangle has vertices  $A(1, 6)$ ,  $B(6, 6)$ ,  $C(6, 3)$  and  $D(1, 3)$ . What is the area of the rectangle?

- A.  10 square units
- B.  20 square units
- C.  15 square units
- D.  16 square units

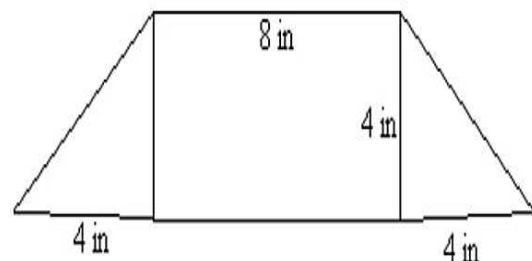
**22.** A triangle has vertices  $X(2, 1)$ ,  $Y(5, 4)$ , and  $Z(5, 1)$ . What is the base and height of the triangle?

- A.  base = 3 units, height = 2 units
- B.  base = 3 units, height = 3 units
- C.  base = 2 units, height = 3 units
- D.  base = 3 units, height = 4 units

**23.** A triangle has vertices  $X(2, 1)$ ,  $Y(5, 4)$ , and  $Z(5, 1)$ . What is the area of the triangle?

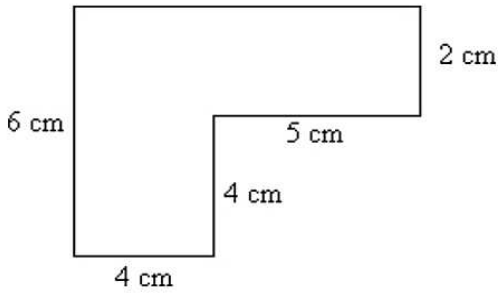
- A.  4.5 square units
- B.  12 square units
- C.  9 square units
- D.  6 square units

**24.** What is the area of the figure?



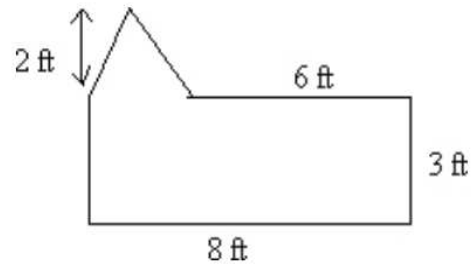
- A.  20 in<sup>2</sup>
- B.  16 in<sup>2</sup>
- C.  32 in<sup>2</sup>
- D.  48 in<sup>2</sup>

25. What is the area of the figure?



- A.  18 cm<sup>2</sup>
- B.  26 cm<sup>2</sup>
- C.  34 cm<sup>2</sup>
- D.  16 cm<sup>2</sup>

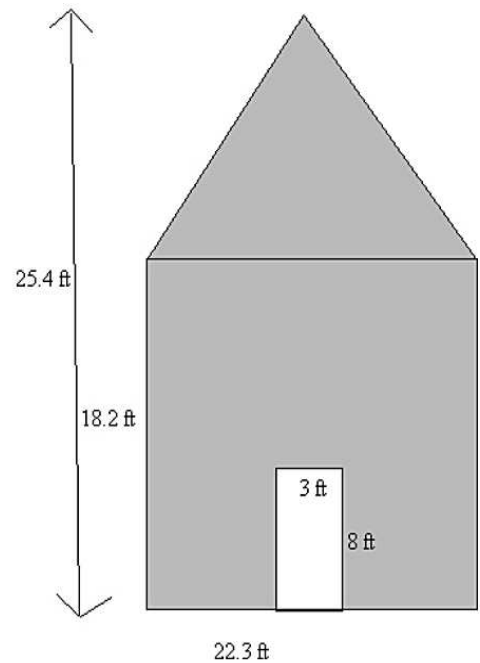
26. What is the area of the figure?



- A.  22 ft<sup>2</sup>
- B.  26 ft<sup>2</sup>
- C.  24 ft<sup>2</sup>
- D.  2 ft<sup>2</sup>

27. Bill is planning to paint the back of his house. What is the total area that he will be painting?

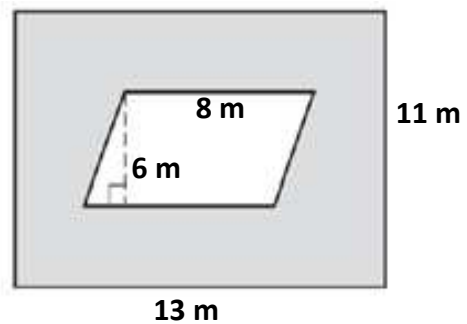
- A.  462.86 ft<sup>2</sup>
- B.  486.86 ft<sup>2</sup>
- C.  24 ft<sup>2</sup>
- D.  231.43 ft<sup>2</sup>



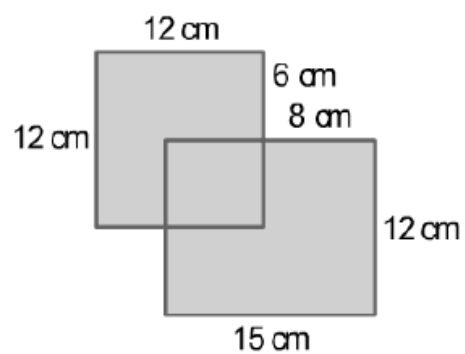
28. Bill is planning to paint the back of his house. If the paint costs AED2 a square foot, how much will it cost him to paint the pack of his house?

- A  AED 462.86
- B  AED 973.72
- C  AED 925.72
- D  AED 48

29. Find the area of the shaded region in each figure..



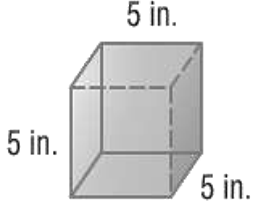
30. find the area of the figure at the right.



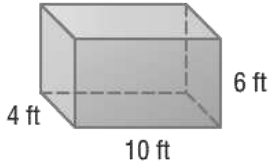


# Volume

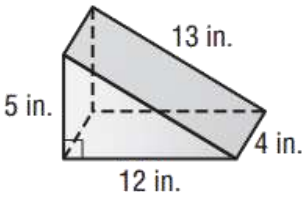
## Cube:

Tips and Hints	Example
$V = s^3$	<p>Find the volume:</p> 

## Rectangular Prism:

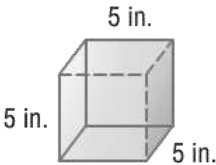
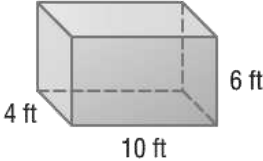
Tips and Hints	Example
$V = Bh \text{ or } V = lwh$	<p>Find the volume:</p> 

## Triangular Prism:

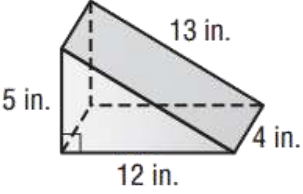
Tips and Hints	Example
<ul style="list-style-type: none"> <li>• <math>V = Bh</math></li> <li>• Find the area of the base (a triangle, <math>A = \frac{1}{2}bh</math>), then multiply by the height of the prism</li> </ul>	<p>Find the volume:</p> 

# Surface Area

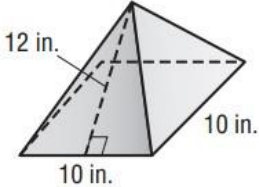
## Rectangular Prism and Cube:

Tips and Hints	Example
<ul style="list-style-type: none"> <li>Find the area of all 6 surfaces, then add them together</li> <li>Draw each surface to help you</li> <li>Rectangle: <math>SA = 2lw + 2lh + 2wh</math></li> <li>Cube: <math>SA = 6s^2</math></li> </ul>	<p>Find the surface area:</p> <p>1.  5 in. 5 in. 5 in.</p> <p>2.  4 ft 10 ft 6 ft</p>

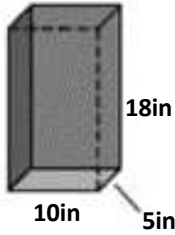
## Triangular Prism:

Tips and Hints	Example
<ul style="list-style-type: none"> <li>Find the area of all surfaces, then add them together</li> <li>Don't forget, the area of a triangle is found by using <math>A = \frac{1}{2}bh</math></li> <li>Draw each surface to help you</li> </ul>	<p>Find the surface area:</p> 

## Pyramid:

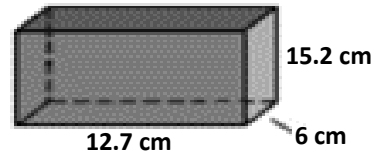
Tips and Hints	Example
<ul style="list-style-type: none"> <li>Find the area of all surfaces, then add them together</li> <li>Don't forget, the area of a triangle is found by using <math>A = \frac{1}{2}bh</math>. Use the slant height for this!</li> <li>Draw each surface to help you</li> </ul>	<p>Find the surface area:</p> 

1. Find the volume of the rectangular prism



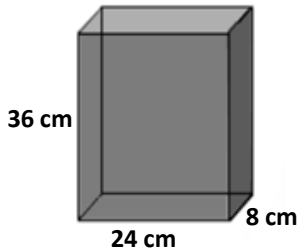
- A.  33 in<sup>3</sup>
- B.  90 in<sup>3</sup>
- C.  900 in<sup>3</sup>
- D.  50 in<sup>3</sup>

2. Find the volume of the rectangular prism. Round the answer to the nearest tenth



- A.  457.2 cm<sup>3</sup>
- B.  1,158.2 cm<sup>3</sup>
- C.  193.0 cm<sup>3</sup>
- D.  1,386.2 cm<sup>3</sup>

3. What is the volume of the shipping container shown?

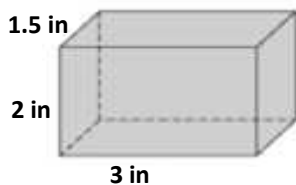


- A.  6,912 cubic centimeters
- B.  108 cubic centimeters
- C.  864 cubic centimeters
- D.  3,456 cubic centimeters

4. What is the volume of a shoebox that measures 14 inches by 8 inches by 8 inches?

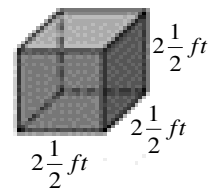
- A.  176 in<sup>3</sup>
- B.  896 in<sup>3</sup>
- C.  112 in<sup>3</sup>
- D.  224 in<sup>3</sup>

5. Find the volume of the rectangular prism.



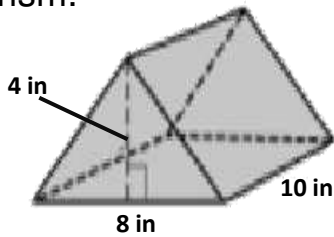
- A.  81 in<sup>3</sup>
- B.  12 in<sup>3</sup>
- C.  9 in<sup>3</sup>
- D.  18 in<sup>3</sup>

6. Find the surface area of the rectangular prism



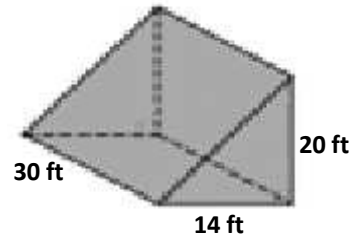
- A.  25 ft<sup>2</sup>
- B.  37  $\frac{1}{2}$  ft<sup>2</sup>
- C.  12  $\frac{1}{2}$  ft<sup>2</sup>
- D.  6  $\frac{1}{4}$  ft<sup>2</sup>

7. Find the volume of the triangular prism.



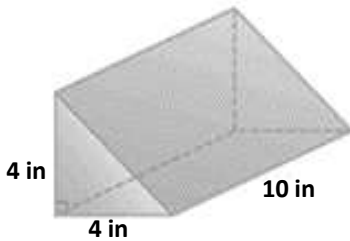
- A.  160 cubic inches
- B.  320 cubic inches
- C.  80 cubic inches
- D.  640 cubic inches

8. Find the volume of the prism below.



- A.  5600 ft<sup>3</sup>
- B.  6400 ft<sup>3</sup>
- C.  4200 ft<sup>3</sup>
- D.  4800 ft<sup>3</sup>

9. Find the volume of the prism.

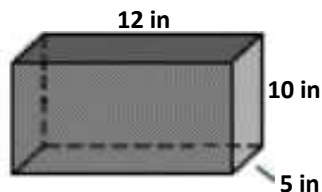


- A.  160 in<sup>3</sup>
- B.  80 in<sup>3</sup>
- C.  18 in<sup>3</sup>
- D.  26 in<sup>3</sup>

10. The base of a right prism has an area of 10 square feet. The height of the prism is 6 feet. What is its volume?

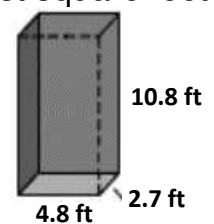
- A.  60 ft<sup>3</sup>
- B.  360 ft<sup>3</sup>
- C.  120 ft<sup>3</sup>
- D.  180 ft<sup>3</sup>

11. Find the surface area of the rectangular prism



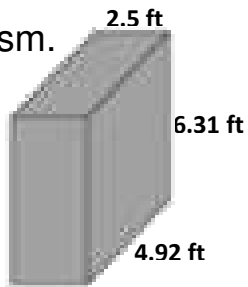
- A.  220 in<sup>2</sup>
- B.  340 in<sup>2</sup>
- C.  360 in<sup>2</sup>
- D.  460 in<sup>2</sup>

12. Find the surface area of the rectangular prism. Round to the nearest square foot.



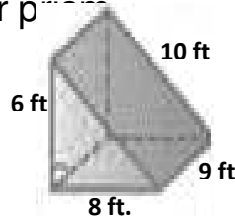
- A.  58 ft<sup>2</sup>
- B.  26 ft<sup>2</sup>
- C.  188 ft<sup>2</sup>
- D.  104 ft<sup>2</sup>

13. Find the surface area of the rectangular prism.



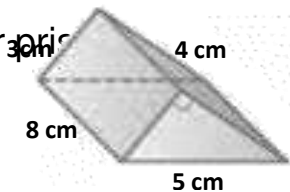
- A.   $60 \text{ ft}^2$
- B.   $84 \text{ ft}^2$
- C.   $104 \text{ ft}^2$
- D.   $52 \text{ ft}^2$

14. Find the surface area of the triangular prism.



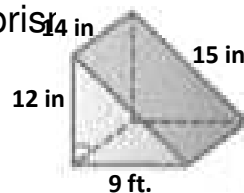
- A.   $174 \text{ ft}^2$
- B.   $132 \text{ ft}^2$
- C.   $264 \text{ ft}^2$
- D.   $312 \text{ ft}^2$

15. Find the surface area of the triangular prism.



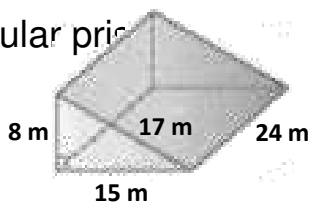
- A.   $63 \text{ cm}^2$
- B.   $108 \text{ cm}^2$
- C.   $120 \text{ cm}^2$
- D.   $136 \text{ cm}^2$

16. Find the surface area of the triangular prism.



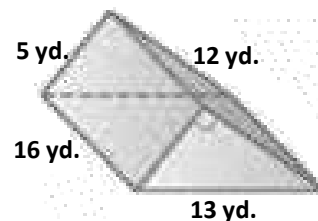
- A.   $612 \text{ in}^2$
- B.   $306 \text{ in}^2$
- C.   $720 \text{ in}^2$
- D.   $402 \text{ in}^2$

17. Find the surface area of the triangular prism.



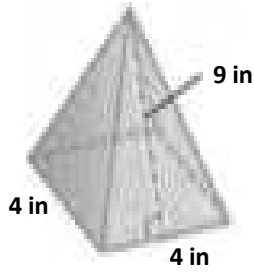
- A.   $540 \text{ m}^2$
- B.   $1,080 \text{ m}^2$
- C.   $1,200 \text{ m}^2$
- D.   $672 \text{ m}^2$

18. Find the surface area of the triangular prism.



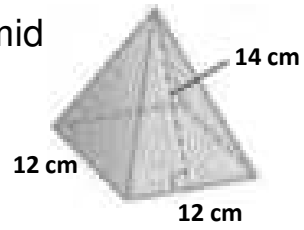
- A.   $270 \text{ yd}^2$
- B.   $610 \text{ yd}^2$
- C.   $540 \text{ yd}^2$
- D.   $600 \text{ yd}^2$

19. Find the surface area of the pyramid



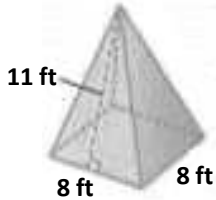
- A.   $72 \text{ in}^2$
- B.   $88 \text{ in}^2$
- C.   $70 \text{ in}^2$
- D.   $106 \text{ in}^2$

20. Find the surface area of the pyramid



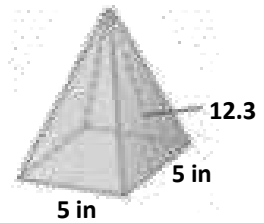
- A.   $336 \text{ cm}^2$
- B.   $480 \text{ cm}^2$
- C.   $396 \text{ cm}^2$
- D.   $564 \text{ cm}^2$

21. Find the surface area of the pyramid.



- A.   $176 \text{ ft}^2$
- B.   $284 \text{ ft}^2$
- C.   $240 \text{ ft}^2$
- D.   $196 \text{ ft}^2$

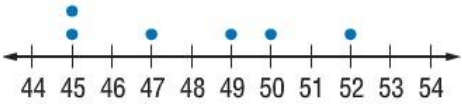
22. Find the surface area of the pyramid



- A.   $148 \text{ in}^2$
- B.   $123 \text{ in}^2$
- C.   $117.25 \text{ in}^2$
- D.   $178.75 \text{ in}^2$

# Measures of Central Tendency

## Mean:

Tips and Hints	Example
1) Add all values in the data set 2) Divide by the number of values in the data set	Find the mean: 1. {3, 4, 0, 6, 2} 2. 

## Median:

Tips and Hints	Example
1) Order the values in the data set from least to greatest 2) The median is the middle number * If there are two numbers in the middle, add them and divide by 2 *	<b>Find the median:</b> 1. 72, 73, 71, 64, 67, 71, 65 2. 46, 62, 62, 57, 50, 42, 56, 40

## Mode:

Tips and Hints	Example
<ul style="list-style-type: none"> <li>The mode is the number that appears most frequently</li> <li>Order the values in the data set from least to greatest to make it easier to find the mode</li> <li>If all values appear the same number of times, there is no mode.</li> <li>If more than one value appears the most, there can be more than one mode.</li> </ul>	<b>Find the mode:</b> 1. 3, 7, 4, 2, 31, 5, 4 2. 23, 27, 20, 23, 22, 20

# Measures of Variation

## Range

Tips and Hints	Example
<ul style="list-style-type: none"> <li>Place the numbers in order from least to greatest</li> <li>The range is the difference between the greatest and the least values</li> </ul>	<p><b>Find the range:</b></p> <p>70, 50, 25, 30, 8, 1</p>

## First and Third Quartiles:

Tips and Hints	Example
<ol style="list-style-type: none"> <li>Place the numbers in order from least to greatest</li> <li>Identify the median</li> <li>1<sup>st</sup> Quartile (Q1) is the median of the first (lower) half of the data</li> <li>3<sup>rd</sup> Quartile (Q3) is the median of the second (upper) half of the data</li> </ol>	<p>Find: Q1 _____ Q3 _____</p> <p>64, 61, 67, 59, 60, 58, 57, 71, 56, 62</p>

## Interquartile Range:

Tips and Hints	Example
<ol style="list-style-type: none"> <li>Place the numbers in order from least to greatest</li> <li>Find the 1<sup>st</sup> and 3<sup>rd</sup> quartiles</li> <li>Subtract: <math>Q3 - Q1</math></li> </ol>	<p>Find the interquartile range: _____</p> <p>23, 48, 49, 55, 57, 63, 72</p>

## Outliers:

Tips and Hints	Example
<ol style="list-style-type: none"> <li>Place the numbers in order from least to greatest</li> <li>Find Q1 and Q3</li> <li>Any number in the data set that is below <math>Q1 - 1.5(IQR)</math> is an outlier</li> <li>Any number in the data set that is above <math>Q3 + 1.5(IQR)</math> is an outlier</li> </ol> <p>* It is possible to have no outliers *</p>	<p>Name any outliers: _____</p> <p>23, 48, 49, 55, 57, 63, 72</p>



## Outlier and Appropriate measure

The table shows the average depth of several lakes

a) Identify the outlier in the data set . **Outlier 1148**

b) Determine how the outlier affects the mean , median , mode and range of the data

Lake	Depth (m)
Lake A	1,148
Lake B	10
Lake C	43
Lake D	62
Lake E	14
Lake F	24

### With the outlier

$$\text{Mean } \frac{1148 + 10 + 43 + 62 + 14 + 24}{6} = \frac{1301}{6} = \underline{216.83}$$

$$\text{Median :- } \frac{24 + 43}{2} = \frac{67}{2} = \underline{33.5}$$

Mode :- No

$$\text{Range :- } 1148 - 10 = 1138$$

10 , 14 , 24 , 43 , 62 , 1148  
 ↓  
 median

### Without the outlier

$$\text{Mean } \frac{10 + 43 + 62 + 14 + 24}{5} = \frac{153}{5} = \underline{30.6}$$

Median :- 24

10 , 14 , 24 , 43 , 62

Mode :- No

$$\text{Range :- } 62 - 10 = 52$$

With the outlier , the best measure is the median; without the outlier , the best measure is the mean

## Mean Absolute deviation

Find the absolute deviation for the set data

Number of Daily Visitors to a Web Site				
112	145	108	160	122

Mean

$$\frac{112 + 145 + 108 + 160 + 122}{5} = \frac{257 + 390}{5} = \frac{647}{5} = 129.4$$

Find the absolute value of difference between and the mean each value

$$160 - 129.4 = 30.6$$

$$145 - 129.4 = 15.6$$

$$129.4 - 122 = 7.4$$

$$129.4 - 112 = 17.4$$

$$129.4 - 108 = 21.4$$

Mean absolute deviation

$$\frac{30.6 + 15.6 + 7.4 + 17.4 + 21.4}{5} = \frac{46.2 + 46.4}{5} = \frac{92.4}{5} = 15.4$$

1. Refer to the set of data below. If 15 were removed from the set of data, which values

59	64	82	15
77	65	40	41
67	81	80	69
56	81	80	81

- A) Range
- B) Mean, median, and range
- C) Range and mean
- D) Mode

2. Which is the **greatest measure** of the given data?

**4, 8, 4, 7, 5, 4, 9, 14**

- A) Mean
- B) Central Tendency
- C) Median
- D) Mode

3. Which measure of **central** tendency is most representative of the data?

**6, 8, 3, 5, 32, 6, 5, 4, 28, 2, 2, 2**

- A) Range
- B) Mode
- C) Median
- D) Mean

4. Which measure of **central** tendency is most representative of the data?

**1, 3, 17, 20, 4, 3, 18, 1, 2, 19**

- A) Range
- B) Mean
- C) Median
- D) Mode

5. Which measures of central tendency are representative of the data?

**15, 10, 13, 20, 152, 18, 8, 5, 13**

- A) Median and mode
- B) Mean, median, and mode
- C) Mean and median
- D) Mean and mode

6. Find the mean of {15, 7, 9, 25, 4}

- A) 13
- B) 10
- C) 12
- D) 9

7. Find the mode of the set of data.

24, 25, 30, 31, 31, 33, 34, 38, 41, 42, 44, 48, 49, 67

- A) 67
- B) 31
- C) 34
- D) 36

8. The heights in inches of 10 senior boys are 64, 65, 66, 68, 71, 72, 73, 73, 73, and 74. Find the mean of the heights.

- A) 69.9 in
- B) 70.0 in
- C) 69.7 in
- D) 69.8 in.

9. Find the range of the data set

145, 612, 120, 349, 515, 212, 590

- A) 512
- B) 470
- C) 445
- D) 492

10. Find the mean, median, and mode of 32, 37, 20, 26, 42, 39, 26, 34, respectively

- A) 34; 33; 26
- B) 32; 33; 26
- C) 34; 33; 26
- D) 32; 32; 26

11. The price for packs of bottled water at a grocery store over a nine week period was as follows: 3.25 , 3.00 , 3.50 , 3.75 , 3.25 , 3.00 , 2.50 , 3.00 , 2.75 . **Find the lower quartile rounded to the penny**

- A) 2.75
- B) 3.00
- C) 2.88
- D) 3.38

12. Find the **interquartile range** of the data.

68 , 15 , 55 , 5 , 66 , 42, 51 , 12 , 23

- A) 47
- B) 42
- C) 63
- D) 60.5

**13.** Find all outliers for the data.

**20, 16, 8, 12, 6, 31, 15, 14.**

- A) none
- B) 6 and 31
- C) 31
- D) 6

**14.** What does the mean absolute deviation of a set of data represent?

- A) the average of the modes of a set of data
- B) the mean of the lower quartile and the upper quartile of a set of data
- C) the average distance between each data value and the mean
- D) the difference between the greatest

**15.** The price for packs of bottled water at a grocery store over a nine week period was as follows: **3.25, 3.00, 3.50, 3.75, 3.25 , 3.00 , 2.50 , 3.00 , 2.75** . Find the upper quartile rounded to the penny

- A) 3.50
- B) 3.38
- C) 2.88
- D) 3.00

**16.** Find the mean absolute deviation for the data in the table. Round to the nearest tenth if necessary

Plant Heights ( in )		
<b>12</b>	<b>14</b>	<b>15</b>
<b>10</b>	<b>16</b>	<b>17</b>

- A) 2
- B) 2.5
- C) 1.8
- D) 3

17. Find the mean absolute deviation for the data in the table. Round to the nearest tenth if necessary

High Temperatures ( F )			
56	65	60	72
83	76	74	70

- A) 7.4
- B) 6.5
- C) 6.9
- D) 6.3

18. Find the mean absolute deviation for the data in the table. Round to the nearest tenth if necessary

Daily Customers to Frozen Yogurt Sop		
35	48	51
45	56	59

- A) 6
- B) 6.3
- C) 6.5
- D) 5.8


19. Find the mean absolute deviation for the data in the table. Round to the nearest tenth if necessary

Largest Wingspans of Birds ( m )				
13.1	12.1	11.2	10.2	8.9

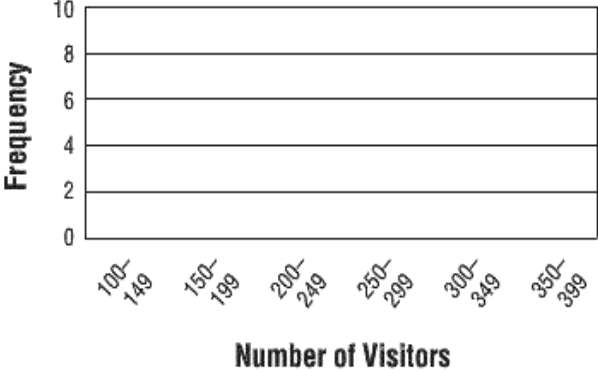
- A) 1.4
- B) 1.2
- C) 2.1
- D) 1.6

# Statistical Displays

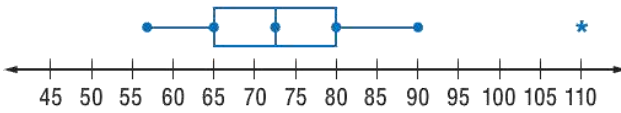
## Dot Plot / Line Plot

Tips and Hints	Example																																		
<ol style="list-style-type: none"> <li>1) Make a frequency table</li> <li>2) Draw a number line that includes each number from the frequency table</li> <li>3) Place a dot or an “x” above the number line to represent the frequency of each number</li> </ol>	<p>Use the data to make a frequency table and a line plot:</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <table border="1" data-bbox="932 501 1182 663"> <thead> <tr> <th colspan="4">Number of Activities</th> </tr> </thead> <tbody> <tr><td>0</td><td>2</td><td>1</td><td>3</td></tr> <tr><td>1</td><td>1</td><td>3</td><td>4</td></tr> <tr><td>2</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>2</td><td>3</td><td>2</td><td>1</td></tr> </tbody> </table> <table border="1" data-bbox="1198 501 1377 748"> <thead> <tr> <th colspan="2">Number of Activities</th> </tr> <tr> <th>Number</th> <th>Tally</th> </tr> </thead> <tbody> <tr><td>0</td><td></td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table> </div> 	Number of Activities				0	2	1	3	1	1	3	4	2	1	0	1	2	3	2	1	Number of Activities		Number	Tally	0		1		2		3		4	
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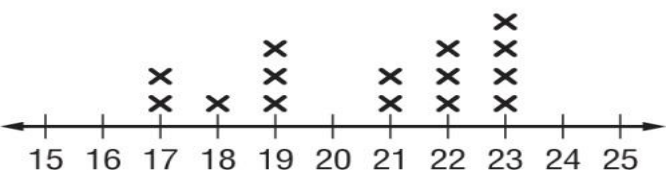
## Histogram:

Tips and Hints	Example																									
<ol style="list-style-type: none"> <li>1) Choose an appropriate interval to use to organize your data</li> <li>2) Make a frequency table</li> <li>3) Draw and label a horizontal and vertical axis and include a title</li> <li>4) Draw a bar for each interval to indicate the frequency</li> </ol> <table border="1" data-bbox="229 1386 604 1559"> <thead> <tr> <th colspan="5">Daily Visitors to Selected State Parks</th> </tr> </thead> <tbody> <tr><td>108</td><td>209</td><td>171</td><td>152</td><td>236</td></tr> <tr><td>165</td><td>244</td><td>263</td><td>212</td><td>161</td></tr> <tr><td>327</td><td>185</td><td>192</td><td>226</td><td>137</td></tr> <tr><td>193</td><td>235</td><td>207</td><td>382</td><td>241</td></tr> </tbody> </table>	Daily Visitors to Selected State Parks					108	209	171	152	236	165	244	263	212	161	327	185	192	226	137	193	235	207	382	241	<p>Use the data to make a frequency table and a histogram :</p> 
Daily Visitors to Selected State Parks																										
108	209	171	152	236																						
165	244	263	212	161																						
327	185	192	226	137																						
193	235	207	382	241																						

## Box Plot:

Tips and Hints	Example
<ol style="list-style-type: none"> <li>1) Order the data from least to greatest</li> <li>2) Find the median, the least value (lower extreme), the greatest value (upper extreme), Q1, and Q3.</li> <li>3) Draw a number line that covers the range of the data.</li> <li>4) Draw the box so that it includes Q1, the median, and Q3.</li> <li>5) Mark the least value and greatest value and extend a line from the box to these values.</li> </ol> <p>[ Outliers are indicated by a * ]</p>	<p>1. Refer to the box plot below. Find:</p> <p>lower extreme: _____ upper extreme: _____            median: _____ Q1: _____ Q2: _____            Outlier(s): _____</p>  <p>2. Draw a box plot to represent:            25, 35, 27, 22, 34, 40, 20, 19, 23, 25, 30</p>

## Distribution

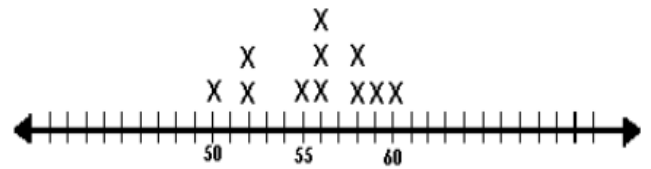
Tips and Hints	Example
<p>The distribution of a data set shows the arrangement of data values. Data are</p> <ul style="list-style-type: none"> <li>• <b>symmetric</b> when the left side of the distribution looks like the right side.</li> <li>• <b>A cluster</b> is data grouped closely together.</li> <li>• <b>A gap</b> is a number that does not have a data value.</li> <li>• <b>A peak</b> is the most frequently occurring value, or mode.</li> </ul>	<p><b>The line plot shows the quiz scores in a social studies class. Describe the shape of the distribution.</b></p> <p style="text-align: center;"><b>Quiz Scores (pts)</b></p>  <p>The shape of the data is not symmetric because the left side of the data does not look like the right side.</p> <p>There are clusters from 17–19 and 21–23.</p> <p>The distribution has a peak at 23.</p> <p>There is a gap at 20.</p> <p>There are no outliers.</p>

1. Use the line plot to find the median.



- A.  55
- B.  55.5
- C.  56
- D.  10

2. Use the line plot to find the mode.



- A.  55
- B.  56
- C.  10
- D.  50

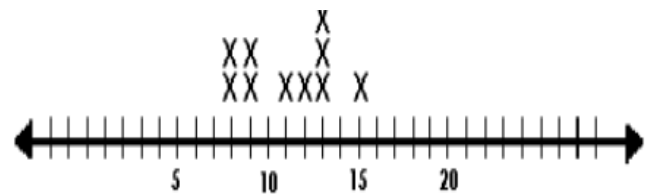
3. Use the line plot to find the range.



- A.  10
- B.  110
- C.  56
- D.  60

4.

Use the line plot to find the median.



- A.  13
- B.  11.5
- C.  7
- D.  12

5. The graph below shows the number of minutes spent on the phone. What conclusion cannot be made about the data in the graph?

- A.  Nineteen calls were made that were between 16 and 20 minutes.
- B.  Fourteen calls were made that were 10 minutes or less.
- C.  There were a total of 69 calls made.
- D.  The interval with the fewest number of calls is 6-10.

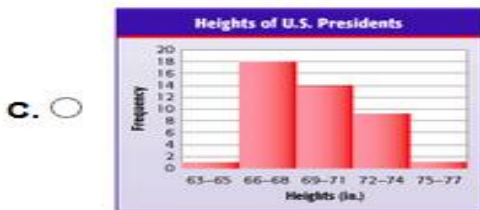
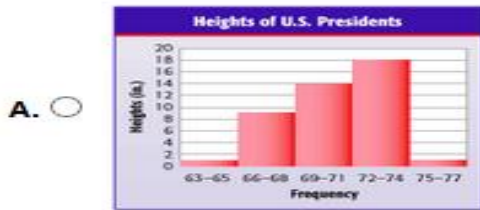




6. The table shows the heights of U.S. Presidents. Which is a histogram of the data?

Heights (in.)	Frequency
63-65	1
66-68	9
69-71	14
72-74	18
75-77	1

Source: whitehouse.gov



7. Which frequency table matches the histogram below?



A.

Number of Books	Frequency
17	8-11
11	12-15
9	16-19
0	20-23
13	24-27

B.

Number of Books	Frequency
8-11	0
12-15	9
16-19	11
20-23	15
24-27	17

C.

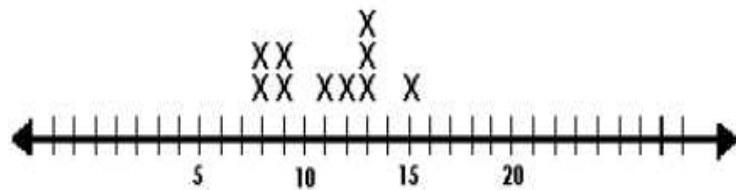
Number of Books	Frequency
8-11	17
12-15	11
16-19	9
20-23	0
24-27	15

D.

Number of Books	Frequency
8-11	16
12-15	10
16-19	8
20-23	1
24-27	14





8. Use the line plot to find the mode.

- A.  21
- B.  11.5
- C.  13
- D.  7




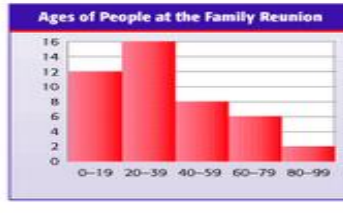
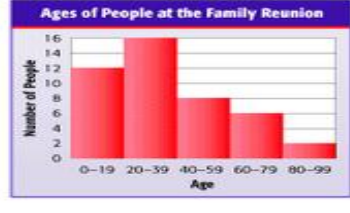
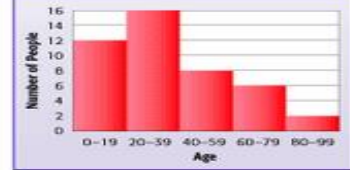
9. Make a histogram to show the number of hours people in the survey slept.

Number of Hours of Sleep	Frequency
4-5	6
6-7	17
8-9	13
10-11	5

- A.  
- B.  
- C.  
- D.  

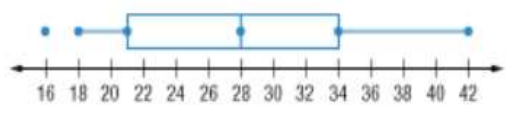
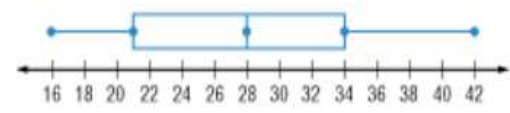
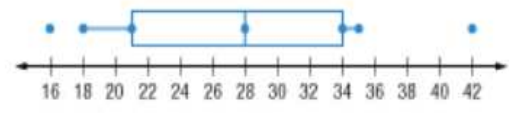
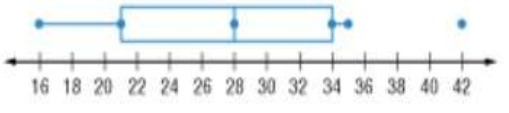
10. The frequency table shows the ages of the people attending a family reunion. Which histogram correctly and completely shows the data?

Age (years)	Number of Players
9	36
10	60
11	44

- A.  
- B.  
- C.  
- D.  

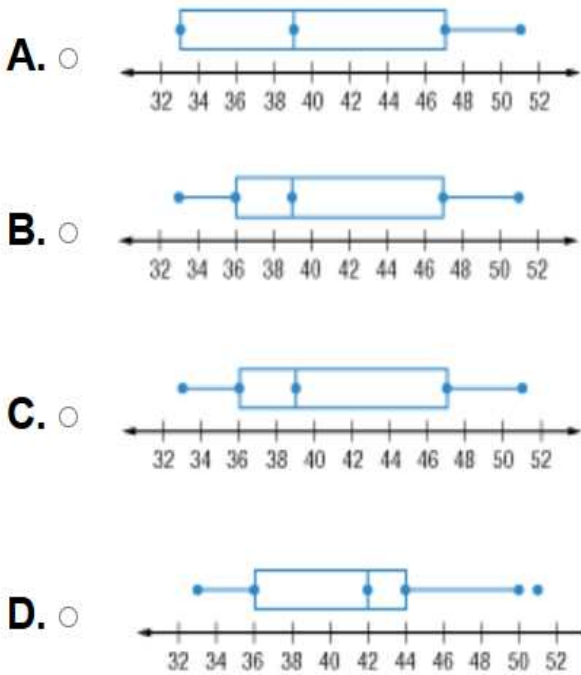
11. Which box-and-whisker plot represents the data?

18, 27, 16, 29, 30, 42, 35, 34, 24, 2

- A.  
- B.  
- C.  
- D.  

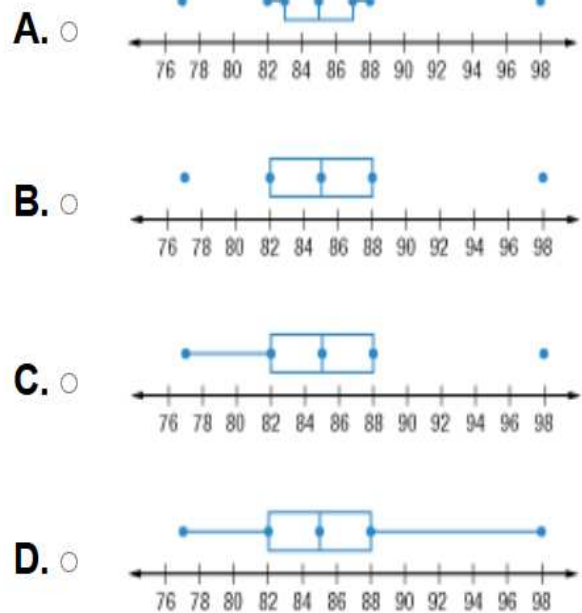
12. Which box-and-whisker plot represents the data?

51, 33, 50, 33, 33, 44, 36, 42



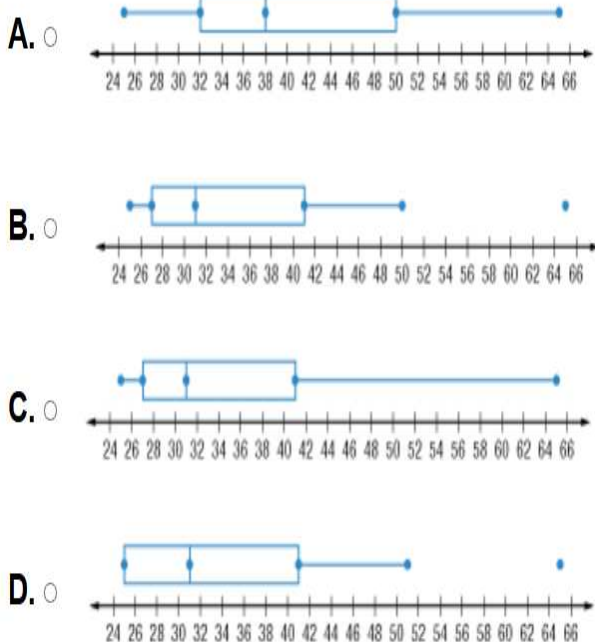
13. Which box-and-whisker plot represents the data?

98, 77, 85, 88, 82, 83, 87



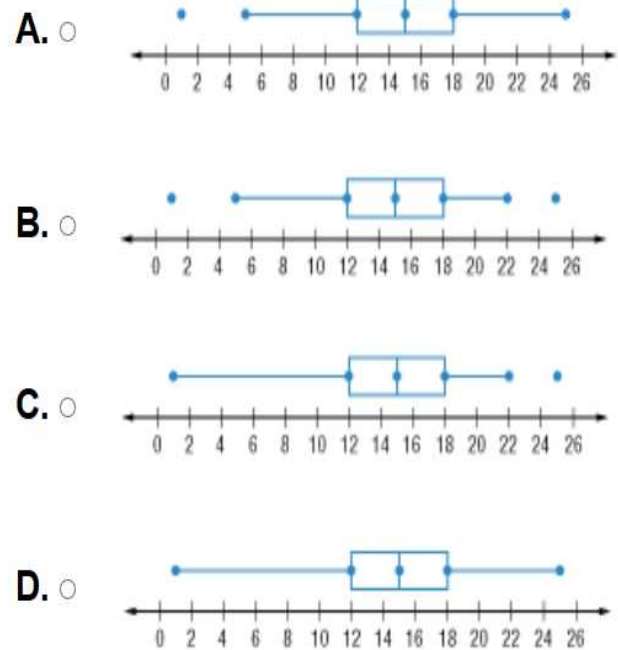
14. Which box-and-whisker plot represents the data?

32, 30, 28, 65, 25, 50, 27, 25, 41, 38



15. Which box-and-whisker plot represents the data?

12, 14, 16, 1, 25, 22, 12, 18, 5, 13, 17, 18



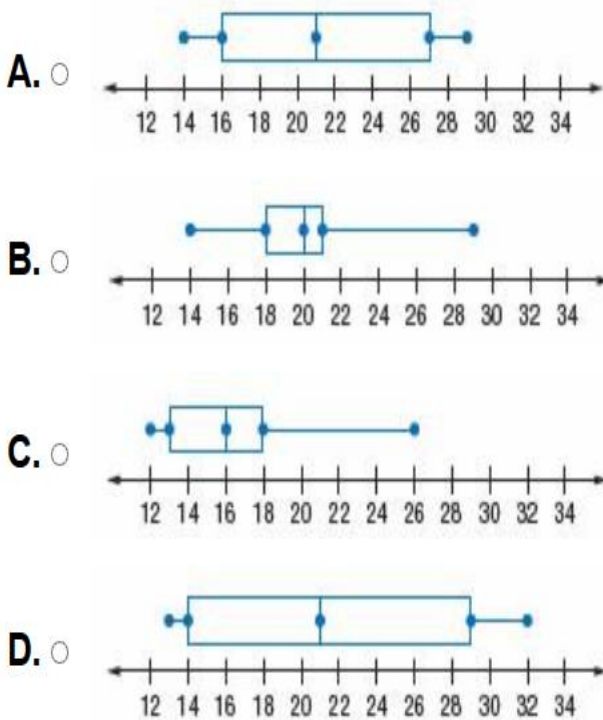
16. If the left side of a distribution looks like the right side, then the distribution is \_\_\_\_.

- A) skewed
- B) normal
- C) symmetric
- D) clustered

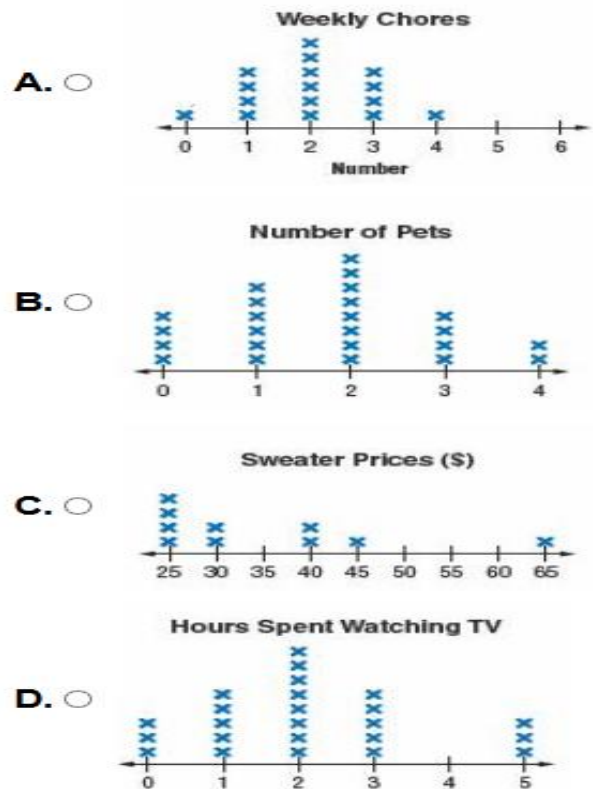
17. The most frequently occurring value is called a \_\_\_\_\_.

- A) distribution
- B) peak
- C) cluster
- D) gap

18. Which set of data has a symmetric distribution?

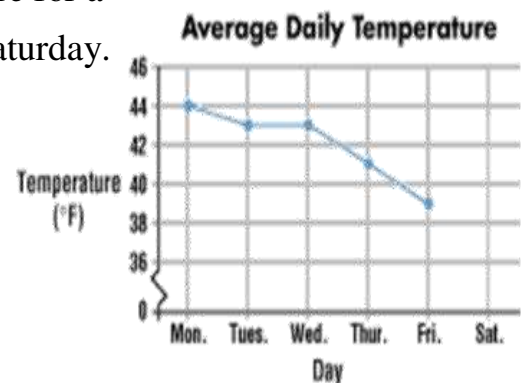


19. Which set of data has an outlier?



20. The line graph shows the average daily temperature for a city. Predict the average temperature in the city for Saturday.

- A.  37°F
- B.  43°F
- C.  46°F
- D.  0°F

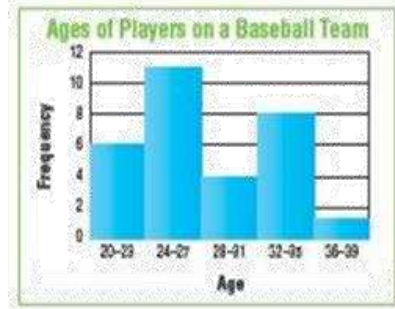


21. Which set of data has a gap?

A.



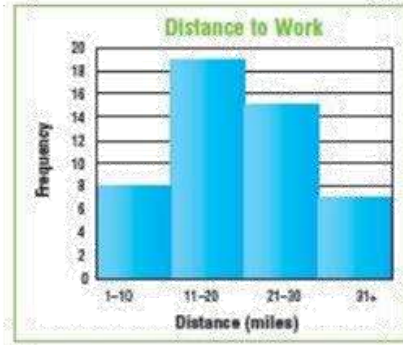
C.



B.



D.



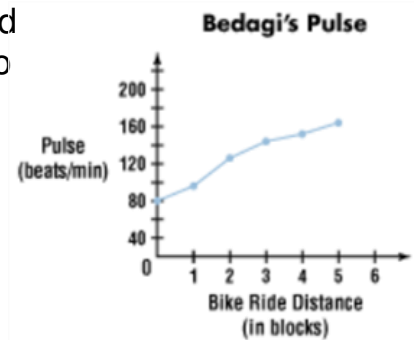
22. Bedagi was told that after a long bicycle ride, he should check his pulse. The graph is of his pulse compared to how many blocks he rode. What will his pulse be after riding 6 blocks?

A.  300 beats per minute

C.  190 beats per minute

B.  160 beats per minute

D.  120 beats per minute



23. The line graph shows the time it takes Kyle to climb the steps in the Statue of Liberty. Predict the total time it will take him to climb 354 steps to the top of the statue, if his rate remains approximately the same

A.  10 min

B.  16 min

C.  12 min

D.  20 min



**24.** The Pacific giant kelp plant is one of the fastest-growing plants in the world. The table below shows the growth of one plant. Predict what the height of the plant will be in week 10.

Pacific Giant Kelp	
Week	Height (ft)
1	1.3
2	2.3
3	3.8
4	5.2
5	6.7
6	7.9
7	9.4

- A.  14 ft                      C.  10 ft  
 B.  20 ft                      D.  12 ft

**25.** You can use \_\_\_\_ to make predictions about future events by looking for patterns

- A.  intervals  
 B.  line graphs  
 C.  circle graphs  
 D.  frequency tables

**26.** A \_\_\_\_\_ is a display that shows frequency of data that has been divided into intervals of equal size.

- A.  line plot  
 B.  histogram  
 C.  bar graph  
 D.  line graph

**27. ELECTIONS** The table shows the number of students who voted for each candidate for class president. Which is an appropriate type of display to compare the number of votes for each candidate?

Candidate	Votes
Becky	42
Crystal	25
Jodi	35
Josh	58
Matt	52

- A.  bar graph  
 B.  histogram  
 C.  line graph  
 D.  line plot

**28. POPULATION** The table shows the population of Fort Worth, Texas. Which is an appropriate type of display to determine how the population has changed since 1950?

Fort Worth, Texas	
Year	Population
1950	278,778
1970	393,455
1980	385,164
1990	447,619
2000	541,099
2004	603,337

Source: *The World Almanac*

- A.  line plot  
 B.  histogram  
 C.  line graph  
 D.  bar graph

**29. TREES** Which display makes it easiest to compare the heights of the largest national champion trees?

Heights of National Champion Trees (ft)

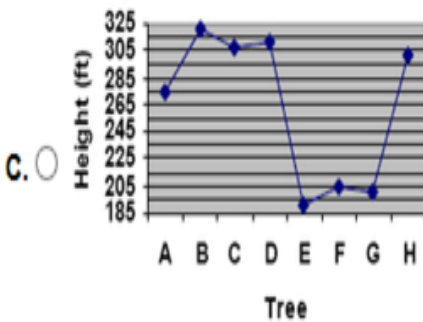


[274, 321, 307, 311, 191, 204, 200, 301]

B.

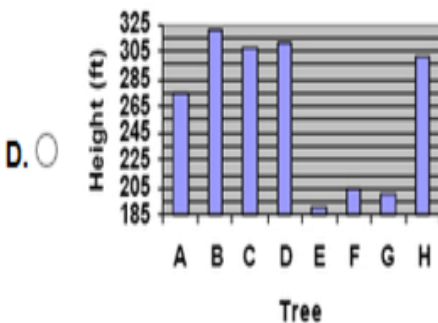
Heights of Largest National Champion Trees (ft)			
274	321	307	311
191	204	200	301

Heights of Largest National Champion Trees



[A=274, B=321, C=307, D=311, E=191, F=204, G=200, H=301]

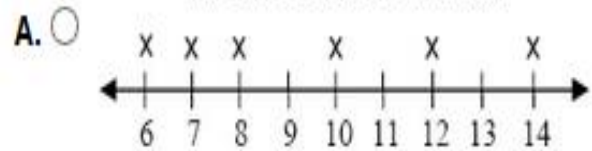
Heights of Largest National Champion Trees



[A=274, B=321, C=307, D=311, E=191, F=204, G=200, H=301]

**30. BASKETBALL** Which display allows you to see whether the record for the girls' basketball team has improved since 2000?

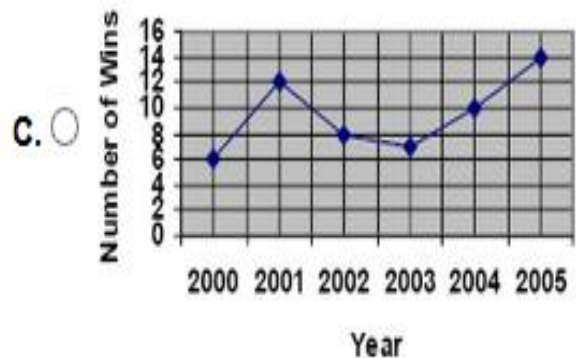
Number of Winning Games by Girls' Basketball Team



B.

Number of Winning Games by Girls' Basketball Team						
Year	2000	2001	2002	2003	2004	2005
No. of Wins	6	12	18	7	10	14

Number of Winning Games by Girls' Basketball Team



Number of Winning Games by Girls' Basketball Team

