



**THIRD SPACE  
LEARNING**

# Types of Data Check for Understanding

A 15 question retrieval quiz for  
students in grades 6 and 7.

**Grades 6 and 7**

## Questions

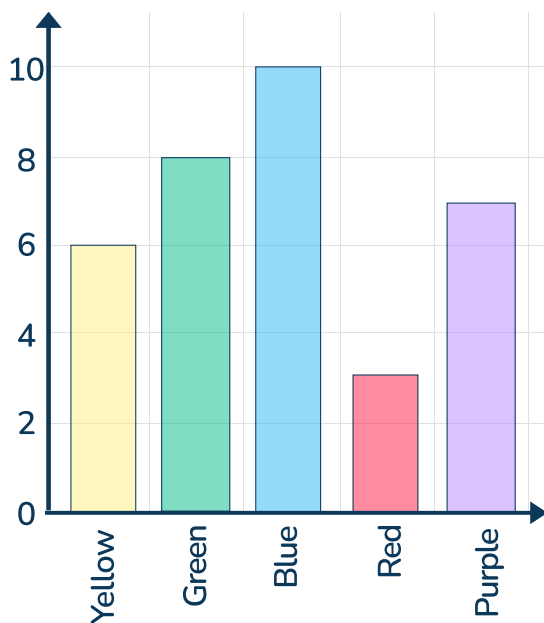
Name: .....

Class: .....

Date: .....

Score: .....

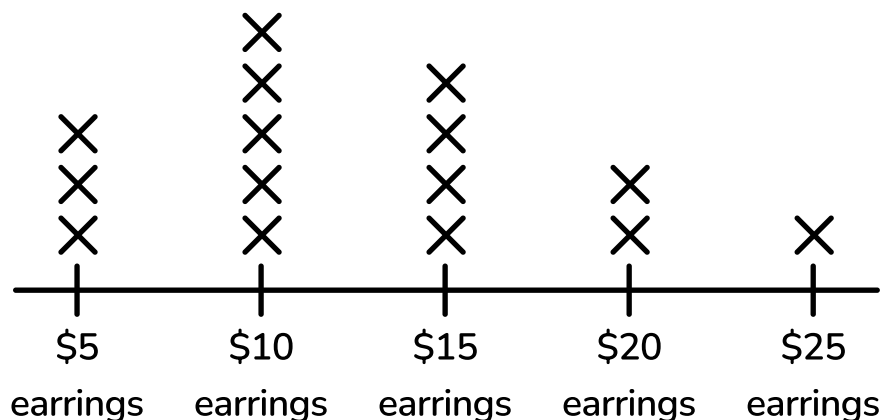
- 1 The bar graph below represents students' favorite color. Fill in the frequency table to match the bar graph.



| Favourite Color | Frequency |
|-----------------|-----------|
| Yellow          |           |
| Green           |           |
| Blue            |           |
| Red             |           |
| Purple          |           |

## Check for Understanding | 6th and 7th Grade | Types of Data

- 2 Jill makes different types of earrings and sells them at the local fair. The line plot below shows the earrings she made and the price she sold them at. How many total pairs of earrings did she sell at the local fair?

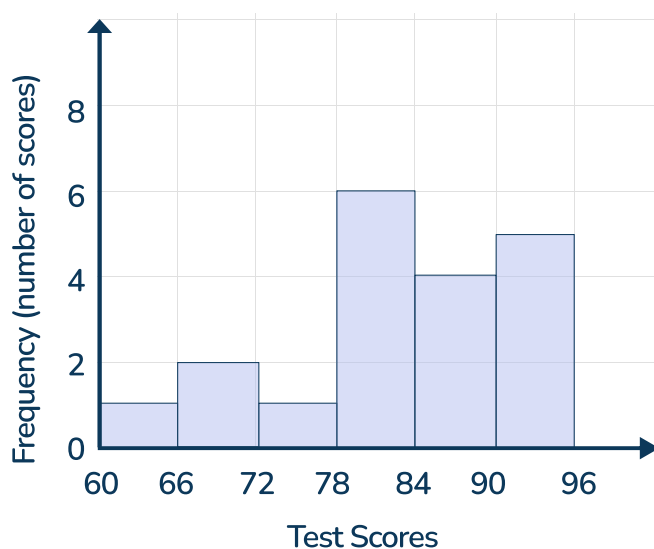


Answer

- 3 Using the same line plot as above, how many more \$10 earrings did she sell than \$20 earrings?

Answer

- 4 The histogram below represents the test scores of a particular science class. Which interval does the median fall into?

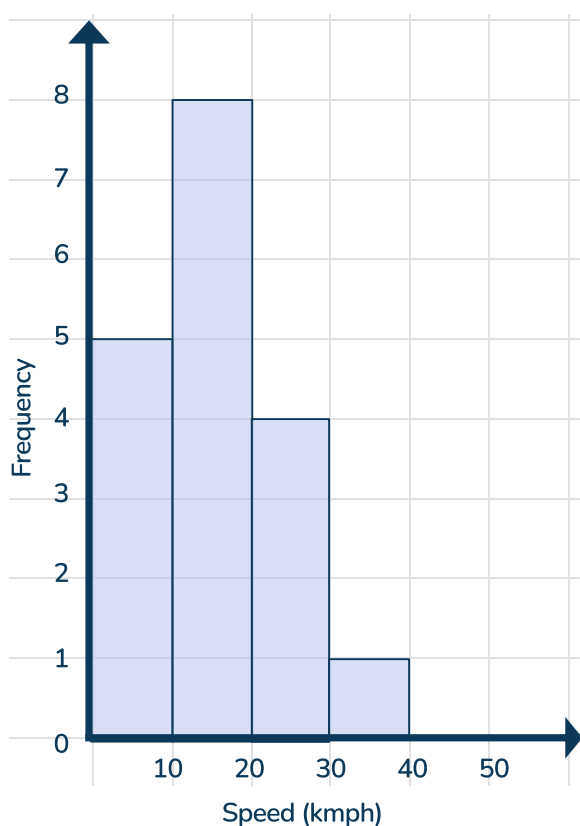


Answer

- 5 The data below represents the ages of students in a college level environmental science class. Create a stem and leaf plot from the data.

19, 20, 18, 17, 19, 30, 32, 24, 19, 22, 20, 30, 25, 22, 21, 20, 19, 18, 22, 27, 25, 30, 19, 22, 23

- 6 The graph below represents a grouped frequency distribution. Complete the grouped frequency table for this distribution.



| Speed intervals  | Frequency |
|------------------|-----------|
| $0 \leq t < 10$  |           |
|                  | 8         |
|                  |           |
| $30 \leq t < 40$ | 1         |



## Check for Understanding | 6th and 7th Grade | Types of Data

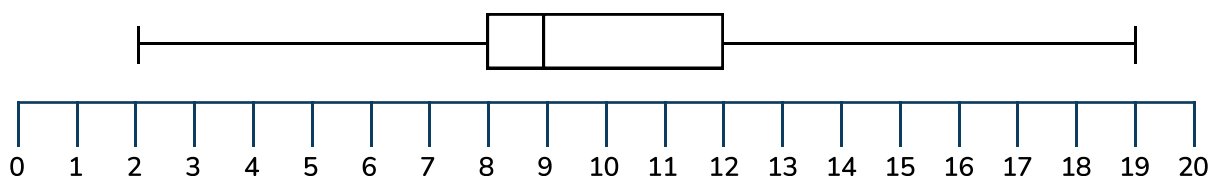
- 7 The cumulative frequency distribution table below shows the amount of time 100 people spend doing leisure activities. Find the missing values.

| Time in minutes on leisure activities | Frequency | Cumulative frequency |
|---------------------------------------|-----------|----------------------|
| $0 \leq t < 10$                       | 10        | 10                   |
| $10 \leq t < 20$                      | 19        |                      |
| $20 \leq t < 30$                      | 27        | 56                   |
| $30 \leq t < 40$                      |           | 95                   |
| $40 \leq t < 50$                      |           | 100                  |

- 8 From the frequency table below, find the missing midpoints and points that would be needed to plot a frequency polygon.

| Interval         | Midpoint | Frequency | Points |
|------------------|----------|-----------|--------|
| $0 \leq t < 10$  |          | 2         |        |
| $10 \leq t < 20$ | 15       | 7         |        |
| $20 \leq t < 30$ |          | 10        |        |
| $30 \leq t < 40$ | 35       | 8         |        |

- 9 Using the box plot below, find the range of the data.



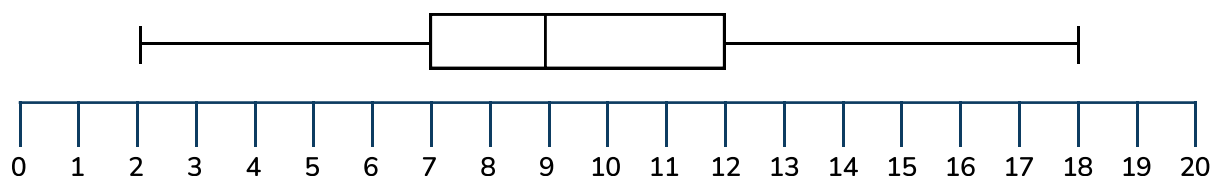
Answer

- 10** The data below shows the amount of time (in minutes) it takes 12 people to get to work. Find the upper and lower quartiles of this data.

18, 20, 9, 11, 12, 37, 25, 30, 10, 5, 18, 17

Answer

- 11** The box plot below shows the distribution of the heights of trees (in feet) at a garden nursery.  
Find the interquartile range of the data.



Answer

- 12** The table below shows descriptive statistics for a set of data.  
Find the upper quartile.

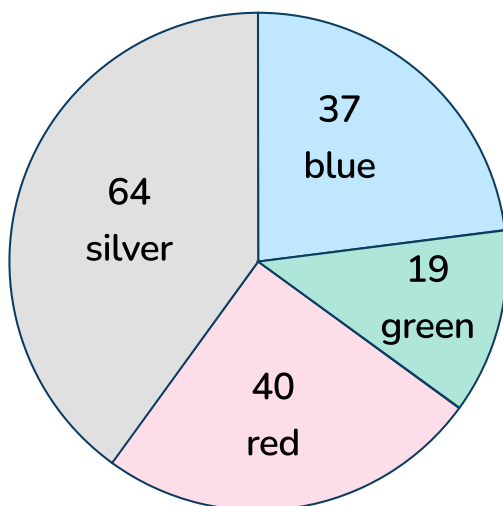
|                     |      |
|---------------------|------|
| Q1 (Lower quartile) | 55.7 |
| Median              | 63.5 |
| Q3 (Upper quartile) | $x$  |
| IQR                 | 8.3  |

Answer

- 13 Create a box plot for the 5 number summary:

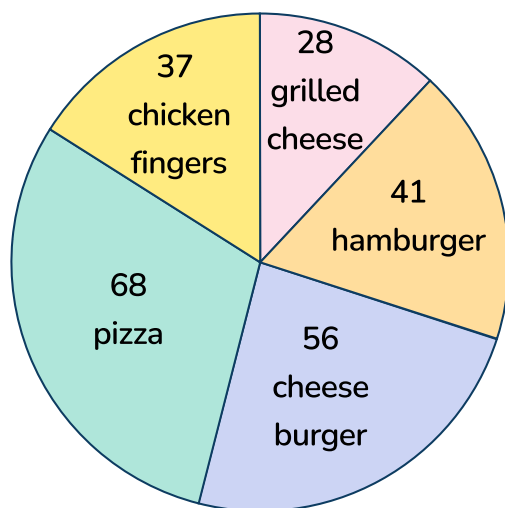
|                 |    |
|-----------------|----|
| Lowest value    | 4  |
| 25th percentile | 11 |
| 50th percentile | 17 |
| 75th percentile | 20 |
| Highest value   | 24 |

- 14 The pie chart below shows the amount of people that prefer a particular car color. What percent of the people prefer silver?



Answer

- 15 The Parkway Diner serves thousands of customers per year. They wanted to figure out which of their fast foods was most popular among all of their customers so they surveyed 230 random customers. The pie chart below represents the data from the survey. Approximately, what percentage of the customers prefer chicken fingers?

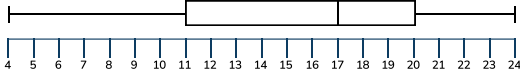


Answer

## Answers

| Question number | Question                                                                                                                                                                                                                  | Answer                                                                                                                                                                                                                                                  | Standard |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1               | The bar graph below represents students' favorite color. Fill in the frequency table to match the bar graph.                                                                                                              | Yellow: 6<br>Green: 8<br>Blue: 10<br>Red: 3<br>Purple: 7                                                                                                                                                                                                | 6.SP.B.4 |
| 2               | Jill makes different types of earrings and sells them at the local fair. The line plot below shows the earrings she made and the price she sold them at. How many total pairs of earrings did she sell at the local fair? | She sold 15 pairs of earrings                                                                                                                                                                                                                           | 6.SP.B.4 |
| 3               | Using the same line plot as above, how many more \$10 earrings did she sell than \$20 earrings?                                                                                                                           | Jill sold 3 more pairs of \$10 earrings than \$20 earrings.<br>$5 - 2 = 3$                                                                                                                                                                              | 6.SP.B.4 |
| 4               | The histogram below represents the test scores of a particular science class. Which interval does the median fall into?                                                                                                   | In total, there are 19 test scores. The median would be the test score in the 10 <sup>th</sup> position. In this case, the 10 <sup>th</sup> test score would be in the 78-84 interval. Therefore, the median test score would be in the 78-84 interval. | 6.SP.B.4 |

| Question number | Question                                                                                                                                                                                                                                                   | Answer                                                                                                                                                                   | Standard               |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 5               | <p>The data below represents the ages of students in a college level environmental science class. Create a stem and leaf plot from the data.</p> <p>19, 20, 18, 17, 19, 30, 32, 24, 19, 22, 20, 30, 25, 22, 21, 20, 19, 18, 22, 27, 25, 30, 19, 22, 23</p> | <pre> 1   7 8 8 9 9 9 9 9    ----- 2   0 0 0 1 2 2 2 2 3 4 5 5 7    ----- 3   0 0 0 2    ----- </pre>                                                                    | 6.SP.B.4               |
| 6               | <p>The graph below represents a grouped frequency distribution. Complete the grouped frequency table for this distribution.</p>                                                                                                                            | <p>Row 1: 5</p> <p>Row 2: <math>10 \leq t &lt; 20</math></p> <p>Row 3: <math>20 \leq t &lt; 30</math>, 4</p>                                                             | 6.SP.B.4               |
| 7               | <p>The cumulative frequency distribution table below shows the amount of time 100 people spend doing leisure activities. Find the missing values.</p>                                                                                                      | <p>Row 2: <math>10 + 19 = 29</math></p> <p>Row 4: <math>95 - 56 = 39</math></p> <p>Row 5: <math>100 - 95 = 5</math></p>                                                  | 6.SP.B.4               |
| 8               | <p>From the frequency table below, find the missing midpoints and points that would be needed to plot a frequency polygon.</p>                                                                                                                             | <p>Missing midpoints: 5, 25</p> <p>Missing points (5, 2), (15, 7), (25, 10), (35, 8)</p>                                                                                 | 6.SP.B.4               |
| 9               | <p>Using the box plot below, find the range of the data.</p>                                                                                                                                                                                               | <p>Range: <math>19 - 2 = 17</math></p>                                                                                                                                   | 6.SP.B.4<br>6.SP.B.5.C |
| 10              | <p>The data below shows the amount of time (in minutes) it takes 12 people to get to work. Find the upper and lower quartiles of this data.</p> <p>18, 20, 9, 11, 12, 37, 25, 30, 10, 5, 18, 17</p>                                                        | <p>Place the data points in order:</p> <p>Lower quartile:<br/> <math>(10 + 11) \div 2 = 10.5</math></p> <p>Upper quartile:<br/> <math>(20 + 25) \div 2 = 22.5</math></p> | 6.SP.B.5.C             |

| Question number | Question                                                                                                                                                                                                                                                                                                                            | Answer                                                                                                                                                     | Standard               |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 11              | The box plot below shows the distribution of the heights of trees (in feet) at a garden nursery. Find the interquartile range of the data.                                                                                                                                                                                          | Interquartile range<br>(IQR) = $12 - 7 = 5$                                                                                                                | 6.SP.B.4<br>6.SP.B.5.C |
| 12              | The table below shows descriptive statistics for a set of data. Find the upper quartile.                                                                                                                                                                                                                                            | $IQR = Q3 - Q1$<br>$8.3 = x - 55.7$<br>$x = 64$<br>Q3 (upper quartile) = 64                                                                                | 6.SP.B.5.C             |
| 13              | Create a box plot for the 5 number summary:                                                                                                                                                                                                                                                                                         |                                                                          | 6.SP.B.4<br>6.SP.B.5.C |
| 14              | The pie chart below shows the amount of people that prefer a particular car color. What percent of the people prefer silver?                                                                                                                                                                                                        | $64 + 37 + 19 + 40 = 160$ (total people)<br>64 people prefer silver<br>$64 \div 160 = 0.4$<br>$0.4 \times 100 = 40\%$<br>40% of the people prefer silver   | 6.SP.B.4<br>6.SP.B.5   |
| 15              | The Parkway Diner serves thousands of customers per year. They wanted to figure out which of their fast foods was most popular among all of their customers so they surveyed 230 random customers. The pie chart below represents the data from the survey. Approximately, what percentage of the customers prefer chicken fingers? | 37 people out of the 230 prefer chicken fingers.<br>$37 \div 230 = 0.161$<br>$0.161 \times 100 = 16.1\%$<br>16.1% of the customers prefer chicken fingers. | 6.SP.B.5<br>7.SP.A.1   |

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