



**THIRD SPACE  
LEARNING**

# Frequency distribution Worksheet

**Statistics and Probability**

**Grades 6 to 8**

## Questions

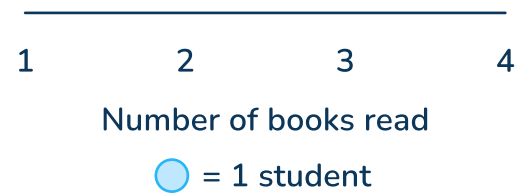
Name: .....

Date: .....

- 1 Complete the dot plot for this table:

Number of books read	Students
1	3
2	5
3	6
4	2

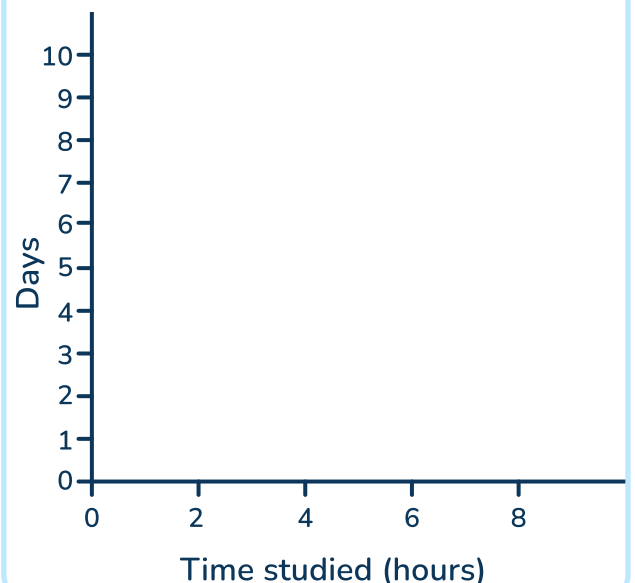
Books read by students



- 2 Complete the histogram for the following data:

Time studied $h$ (hours)	Days
$0 \leq h < 2$	3
$2 \leq h < 4$	5
$4 \leq h < 6$	7
$6 \leq h < 8$	4

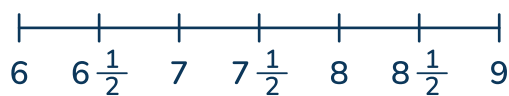
Hours studied each day



3 Complete the dot plot for this table:

Height (ft)	6	$6\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9
Christmas Trees	2	3	4	1	4	4	1

Height of Christmas Tree for Sale



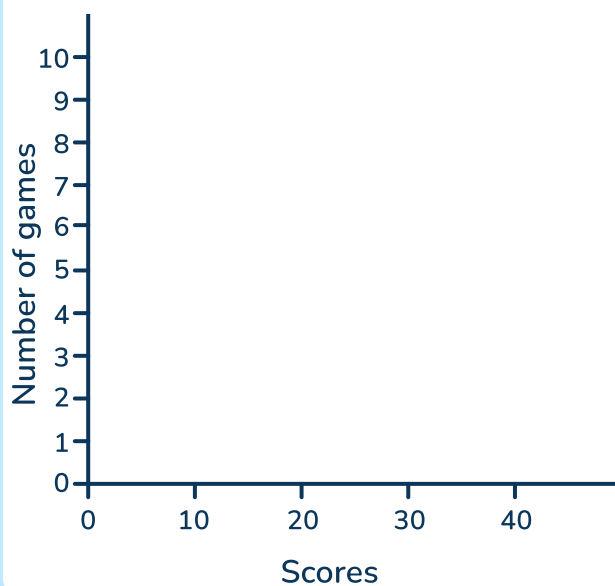
Height (feet)

● = 1 tree

4 Complete the histogram for the following data:

Score $s$	Games
$0 \leq s < 10$	2
$10 \leq s < 20$	6
$20 \leq s < 30$	5
$30 \leq s < 40$	3

Scores of each game



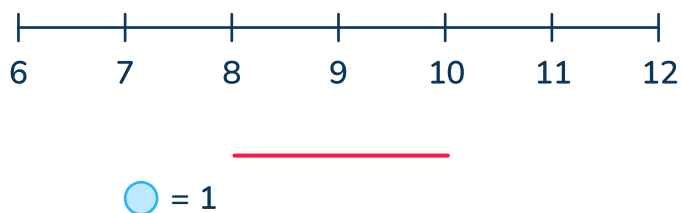
## Frequency distribution Worksheet | Grades 6 to 8

### 5 Shoe Sizes of 20 Middle School Students:

6, 7, 10, 7, 9, 6, 8, 7, 10, 9, 6, 8, 7, 9, 6, 8, 11, 7, 9, 12

Create a dot plot for the data. Complete all parts of the plot.

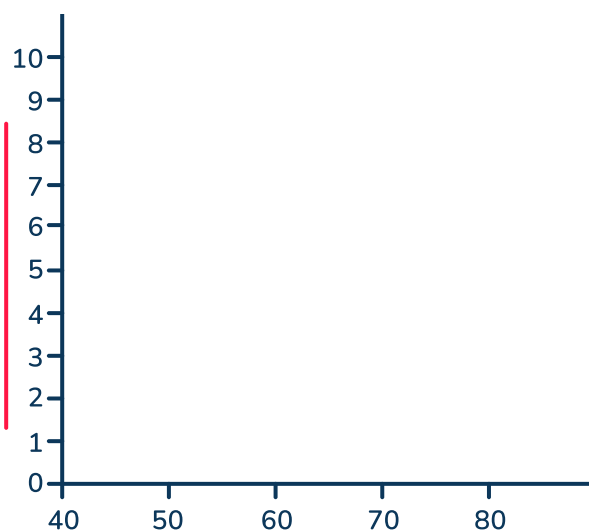
Shoe Sizes of 20 Middle School Students



### 6 Create a histogram for the following data. Complete all parts of the graph.

Weight $w$ (kg)	Animals
$40 \leq w < 50$	3
$50 \leq w < 60$	5
$60 \leq w < 70$	6
$70 \leq w < 80$	4

Weight of animals at the zoo

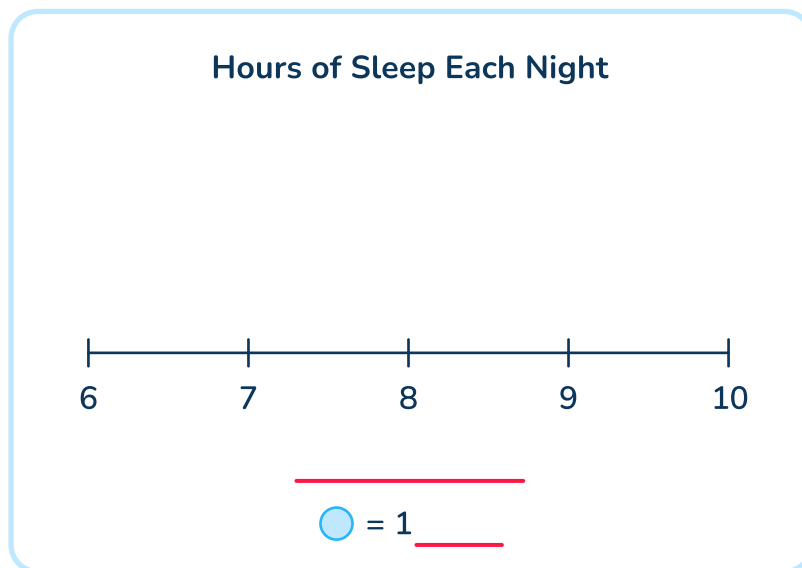


## Frequency distribution Worksheet | Grades 6 to 8

### 7 Hours of Sleep Each Night:

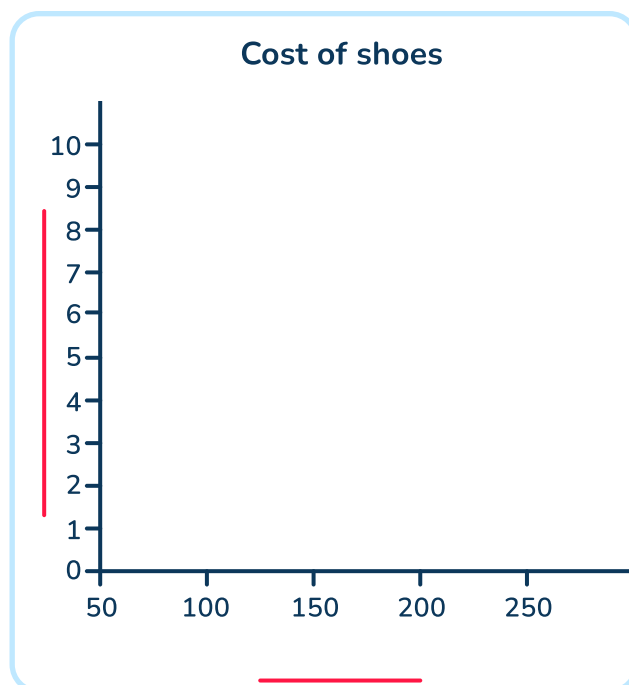
7, 8, 8, 9, 7, 10, 7, 7, 6, 8, 7, 8, 9, 9, 8, 7, 7, 8

Create a dot plot for the data. Complete all parts of the plot.



### 8 Create a histogram for the following data. Complete all parts of the graph.

Shoe cost $x$ (\$)	Pairs of shoes
$50 \leq x < 100$	4
$100 \leq x < 150$	6
$150 \leq x < 200$	5
$200 \leq x < 250$	3



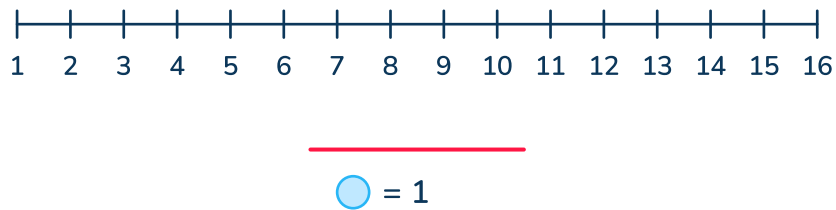
## Frequency distribution Worksheet | Grades 6 to 8

### 9 Age of Vehicles at a Used Car Lot (years):

13, 6, 6, 4, 2, 8, 9, 11, 2, 3, 6, 4, 7, 8, 3, 4, 15, 11, 3, 2, 4, 1

Create a dot plot for the data. Complete all parts of the plot.

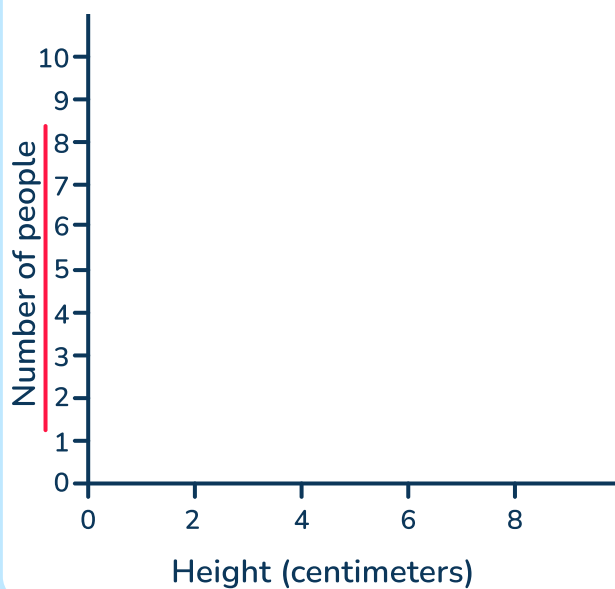
Age of Vehicles at a Used Car Lot



### 10 Create a histogram for the following data:

Height $h$ (cm)	Number of People
$100 \leq h < 120$	5
$120 \leq h < 140$	8
$140 \leq h < 160$	4
$160 \leq h < 180$	6

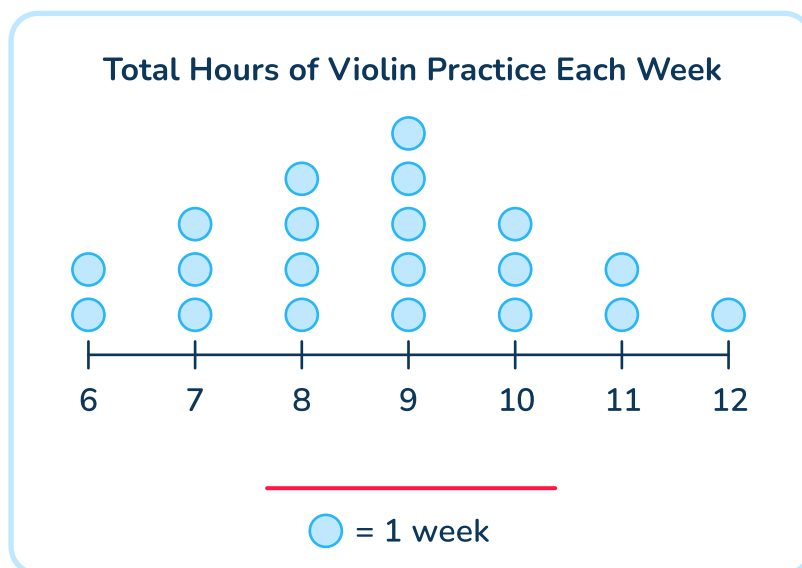
Height of People



## Frequency distribution Worksheet | Grades 6 to 8

Use the dot plot to answer questions 11–15.

11



Label the missing units of the number line.

12 Which total hours of practice occurred the least?

Answer

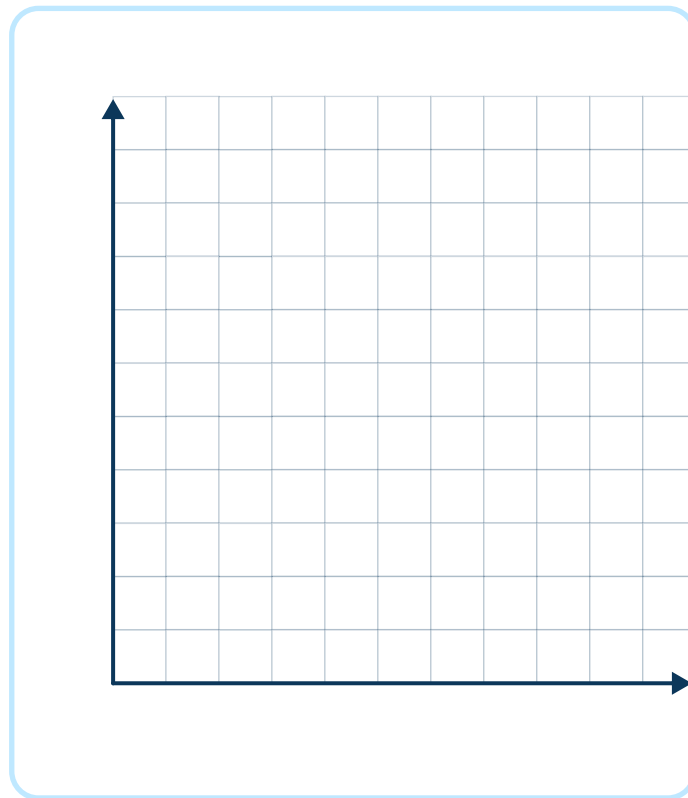
13 How many more weeks were there 8 hours of practice than 11 hours?

Answer

14 What were the total hours of violin practice for all weeks?

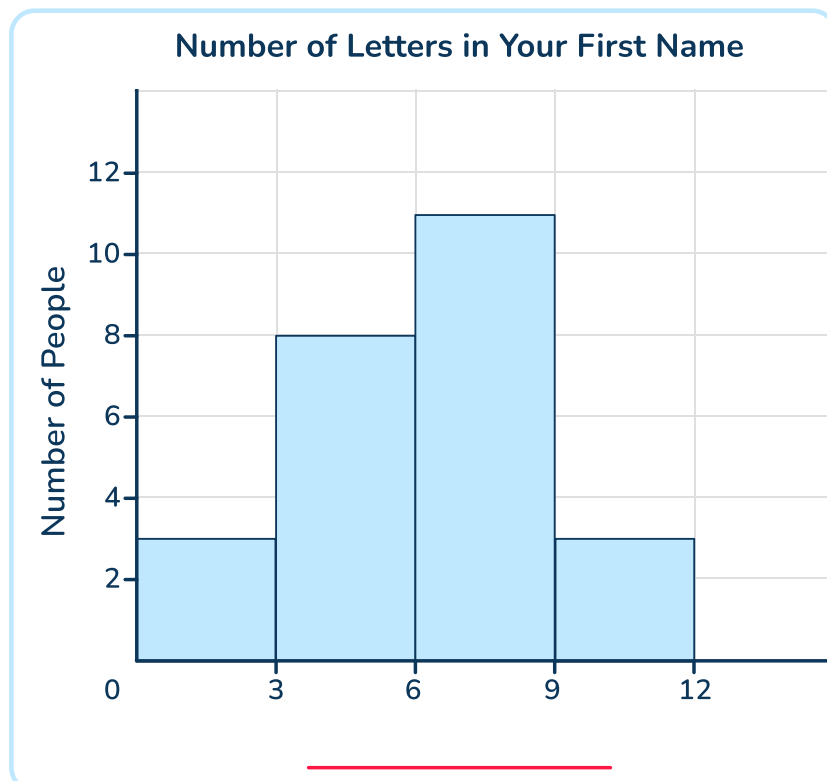
Answer

- 15 Show the dot plot as a histogram with a bin size of 2.



Use the histogram to answer questions 16–20.

16



Label the missing units of the  $x$ -axis.



17 What is the bin size?

Answer

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18 Which bin has the most first names?

Answer

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19 How many first names are represented by the histogram?

Answer

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20 Explain why you cannot show this histogram as a dot plot.

Answer

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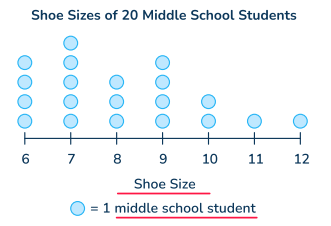
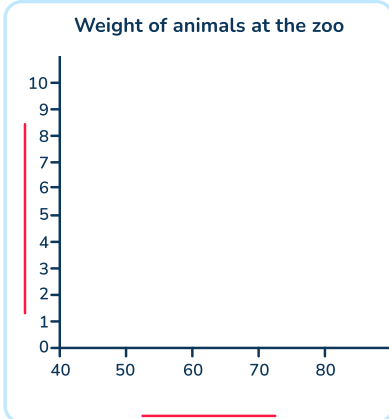
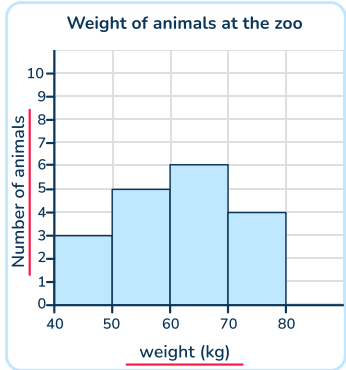
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## Answers

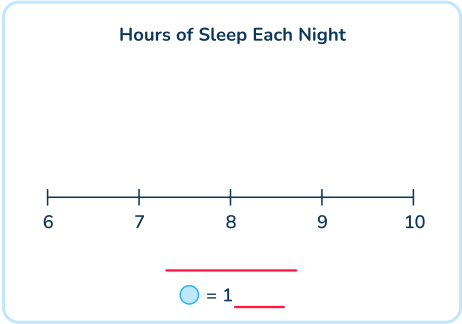
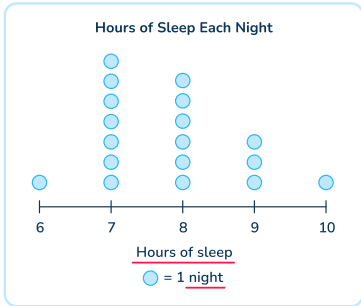
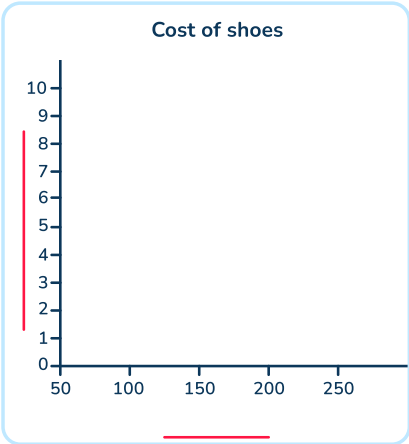

Question number	Question	Answers	Standard										
1	<p>Complete the dot plot for this table:</p> <table><thead><tr><th>Number of books read</th><th>Students</th></tr></thead><tbody><tr><td>1</td><td>3</td></tr><tr><td>2</td><td>5</td></tr><tr><td>3</td><td>6</td></tr><tr><td>4</td><td>2</td></tr></tbody></table> <div><p>Books read by students</p></div>	Number of books read	Students	1	3	2	5	3	6	4	2	<div><p>Books read by students</p></div>	6.SP.B.4
Number of books read	Students												
1	3												
2	5												
3	6												
4	2												
2	<p>Complete the histogram for the following data:</p> <table><thead><tr><th>Time studied <math>h</math> (hours)</th><th>Days</th></tr></thead><tbody><tr><td><math>0 \leq h &lt; 2</math></td><td>3</td></tr><tr><td><math>2 \leq h &lt; 4</math></td><td>5</td></tr><tr><td><math>4 \leq h &lt; 6</math></td><td>7</td></tr><tr><td><math>6 \leq h &lt; 8</math></td><td>4</td></tr></tbody></table> <div><p>Hours studied each day</p></div>	Time studied $h$ (hours)	Days	$0 \leq h < 2$	3	$2 \leq h < 4$	5	$4 \leq h < 6$	7	$6 \leq h < 8$	4	<div><p>Hours studied each day</p></div>	6.SP.B.4
Time studied $h$ (hours)	Days												
$0 \leq h < 2$	3												
$2 \leq h < 4$	5												
$4 \leq h < 6$	7												
$6 \leq h < 8$	4												

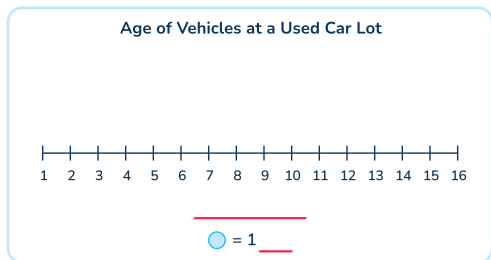
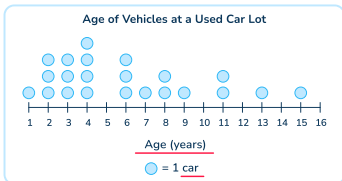
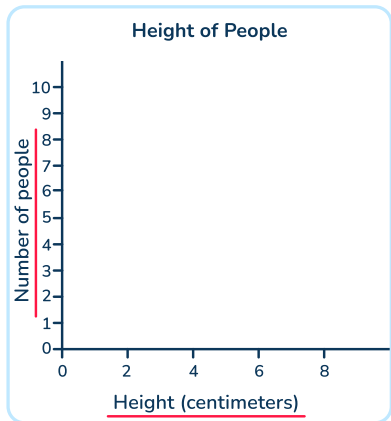
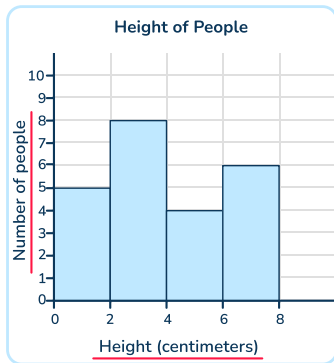
Question number	Question	Answers	Standard																
3	<p>Complete the dot plot for this table:</p> <table><tr><th>Height (ft)</th><td>6</td><td><math>6\frac{1}{2}</math></td><td>7</td><td><math>7\frac{1}{2}</math></td><td>8</td><td><math>8\frac{1}{2}</math></td><td>9</td></tr><tr><th>Christmas Trees</th><td>2</td><td>3</td><td>4</td><td>1</td><td>4</td><td>4</td><td>1</td></tr></table> <div><p>Height of Christmas Tree for Sale</p></div>	Height (ft)	6	$6\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	Christmas Trees	2	3	4	1	4	4	1	<div><p>Height of Christmas Tree for Sale</p></div>	6.SP.B.4
Height (ft)	6	$6\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9												
Christmas Trees	2	3	4	1	4	4	1												
4	<p>Complete the histogram for the following data:</p> <table><tr><th>Score <math>s</math></th><th>Games</th></tr><tr><td><math>0 \leq s &lt; 10</math></td><td>2</td></tr><tr><td><math>10 \leq s &lt; 20</math></td><td>6</td></tr><tr><td><math>20 \leq s &lt; 30</math></td><td>5</td></tr><tr><td><math>30 \leq s &lt; 40</math></td><td>3</td></tr></table> <div><p>Scores of each game</p></div>	Score $s$	Games	$0 \leq s < 10$	2	$10 \leq s < 20$	6	$20 \leq s < 30$	5	$30 \leq s < 40$	3	<div><p>Scores of each game</p></div>	6.SP.B.4						
Score $s$	Games																		
$0 \leq s < 10$	2																		
$10 \leq s < 20$	6																		
$20 \leq s < 30$	5																		
$30 \leq s < 40$	3																		

# Frequency distribution Worksheet | Grades 6 to 8 | Answers

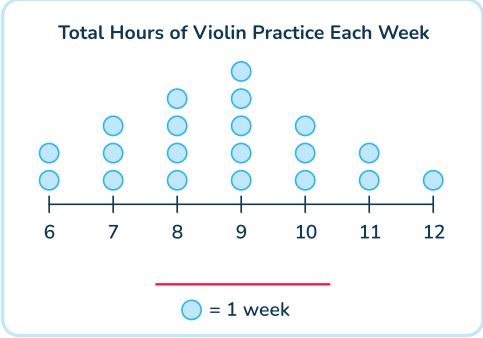
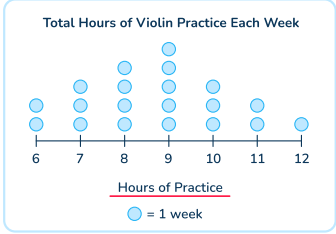
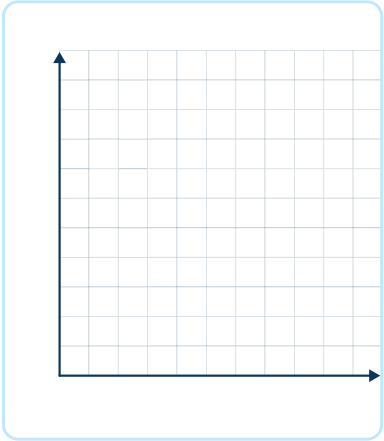
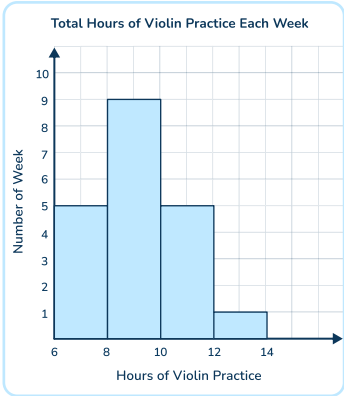
Question number	Question	Answers	Standard										
5	<p>Shoe Sizes of 20 Middle School Students:</p> <p>6, 7, 10, 7, 9, 6, 8, 7, 10, 9, 6, 8, 7, 9, 6, 8, 11, 7, 9, 12</p> <p>Create a dot plot for the data.</p> <p>Complete all parts of the plot.</p> <div><p>Shoe Sizes of 20 Middle School Students</p></div>	<div><p>Shoe Sizes of 20 Middle School Students</p></div>	6.SP.B.4										
6	<p>Create a histogram for the following data. Complete all parts of the graph.</p> <table><thead><tr><th>Weight <math>w</math> (kg)</th><th>Animals</th></tr></thead><tbody><tr><td><math>40 \leq w &lt; 50</math></td><td>3</td></tr><tr><td><math>50 \leq w &lt; 60</math></td><td>5</td></tr><tr><td><math>60 \leq w &lt; 70</math></td><td>6</td></tr><tr><td><math>70 \leq w &lt; 80</math></td><td>4</td></tr></tbody></table> <div><p>Weight of animals at the zoo</p></div>	Weight $w$ (kg)	Animals	$40 \leq w < 50$	3	$50 \leq w < 60$	5	$60 \leq w < 70$	6	$70 \leq w < 80$	4	<div><p>Weight of animals at the zoo</p></div>	6.SP.B.4
Weight $w$ (kg)	Animals												
$40 \leq w < 50$	3												
$50 \leq w < 60$	5												
$60 \leq w < 70$	6												
$70 \leq w < 80$	4												

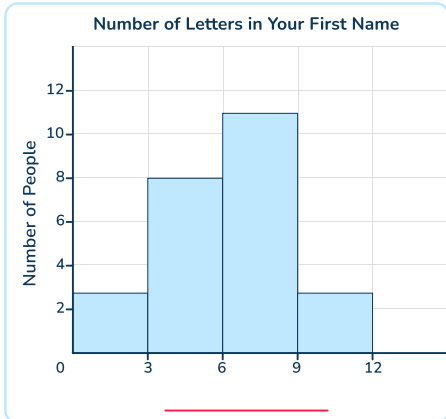
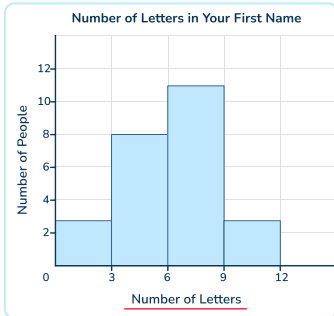
# Frequency distribution Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard										
7	<p>Hours of Sleep Each Night: 7, 8, 8, 9, 7, 10, 7, 7, 6, 8, 7, 8, 9, 9, 8, 7, 7, 8</p> <p>Create a dot plot for the data. Complete all parts of the plot.</p> <div><p>Hours of Sleep Each Night</p></div>	<div><p>Hours of Sleep Each Night</p></div>	6.SP.B.4										
8	<p>Create a histogram for the following data. Complete all parts of the graph.</p> <table><thead><tr><th>Shoe cost <math>x</math> (\$)</th><th>Pairs of shoes</th></tr></thead><tbody><tr><td><math>50 \leq x &lt; 100</math></td><td>4</td></tr><tr><td><math>100 \leq x &lt; 150</math></td><td>6</td></tr><tr><td><math>150 \leq x &lt; 200</math></td><td>5</td></tr><tr><td><math>200 \leq x &lt; 250</math></td><td>3</td></tr></tbody></table> <div><p>Cost of shoes</p></div>	Shoe cost $x$ (\$)	Pairs of shoes	$50 \leq x < 100$	4	$100 \leq x < 150$	6	$150 \leq x < 200$	5	$200 \leq x < 250$	3	<div><p>Cost of shoes</p></div>	6.SP.B.4
Shoe cost $x$ (\$)	Pairs of shoes												
$50 \leq x < 100$	4												
$100 \leq x < 150$	6												
$150 \leq x < 200$	5												
$200 \leq x < 250$	3												

Question number	Question	Answers	Standard										
9	<p>Age of Vehicles at a Used Car Lot (years): 13, 6, 6, 4, 2, 8, 9, 11, 2, 3, 6, 4, 7, 8, 3, 4, 15, 11, 3, 2, 4, 1</p> <p>Create a dot plot for the data. Complete all parts of the plot.</p> <div><p>Age of Vehicles at a Used Car Lot</p></div>	<div><p>Age of Vehicles at a Used Car Lot</p></div>	6.SP.B.4										
10	<p>Create a histogram for the following data:</p> <table><thead><tr><th>Height <math>h</math> (cm)</th><th>Number of People</th></tr></thead><tbody><tr><td><math>100 \leq h &lt; 120</math></td><td>5</td></tr><tr><td><math>120 \leq h &lt; 140</math></td><td>8</td></tr><tr><td><math>140 \leq h &lt; 160</math></td><td>4</td></tr><tr><td><math>160 \leq h &lt; 180</math></td><td>6</td></tr></tbody></table> <div><p>Height of People</p></div>	Height $h$ (cm)	Number of People	$100 \leq h < 120$	5	$120 \leq h < 140$	8	$140 \leq h < 160$	4	$160 \leq h < 180$	6	<div><p>Height of People</p></div>	6.SP.B.4
Height $h$ (cm)	Number of People												
$100 \leq h < 120$	5												
$120 \leq h < 140$	8												
$140 \leq h < 160$	4												
$160 \leq h < 180$	6												

# Frequency distribution Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
11	<p>Total Hours of Violin Practice Each Week</p>  <p>Label the missing units of the number line.</p>	<p>Total Hours of Violin Practice Each Week</p> 	6.SP.B.5
12	Which total hours of practice occurred the least?	12 hours	6.SP.B.5
13	How many more weeks were there 8 hours of practice than 11 hours?	2 weeks	6.SP.B.5
14	What were the total hours of violin practice for all weeks?	174 hours	6.SP.B.5
15	<p>Show the dot plot as a histogram with a bin size of 2.</p> 	<p>Total Hours of Violin Practice Each Week</p> 	6.SP.B.4

Question number	Question	Answers	Standard
16	 <p>Label the missing units of the <math>x</math>-axis.</p>		6.SP.B.5
17	What is the bin size?	3 units	6.SP.B.5
18	Which bin has the most first names?	$6 \leq x < 9$	6.SP.B.5
19	How many first names are represented by the histogram?	25 first names	6.SP.B.5
20	Explain why you cannot show this histogram as a dot plot.	<p>Answers may vary.</p> <p>Example answer: To create a dot plot, you need to know the exact value of each data point. The histogram tells you how many data points are in a certain range, but you don't know the exact value of those data points.</p>	6.SP.B.4






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