$\qquad$

## Interquartile Range

The interquartile range (IQR) of a data set is the difference between the third quartile and the first quartile:

$$
I Q R=Q_{3}-Q_{1}
$$

Let's try an example. Find the interquartile range of this data set: $3,6,9,12,15,18,20,21,21$.

First, make sure your data set is in order. Then, split the data into quartiles.

$$
\begin{aligned}
& 3,6,\left.\right|_{\mid} ^{Q_{1}} 9,12, \underbrace{Q_{2}}_{\text {median }}) 18,20,\left.\right|^{Q_{3}} 21, \quad 21 \\
& \frac{6+9}{2}=7.5 \quad \frac{20+21}{2}=20.5
\end{aligned}
$$

Then, subtract!

$$
20.5-7.5=13
$$

So, the interquartile range of this data set is 13 .

Find the interquartile range of each data set. Make sure to put each data set in order first!

| $\begin{aligned} & 11,14,20,21,24,30,31 \\ & I Q R= \end{aligned}$ | $\begin{aligned} & 5,2,6,15,9,10,11 \\ & I Q R= \end{aligned}$ |
| :---: | :---: |
| $7,11,12,18,22,25$ IQR = | $\begin{aligned} & 4,8,25,13,15,8,15,19,7 \\ & I Q R= \end{aligned}$ |
| $\begin{aligned} & 16,35,30,14,15,16,17,34 \\ & I Q R= \end{aligned}$ | $23,19,21,41,29,37,38,42,37$ <br> $\mid Q R=$ $\qquad$ |
| $\begin{aligned} & 3,29,47,11,25,19,28,45 \\ & \mathrm{IQR}= \end{aligned}$ | $24,26,41,46,50,39,22,25,44$ IQR = |

