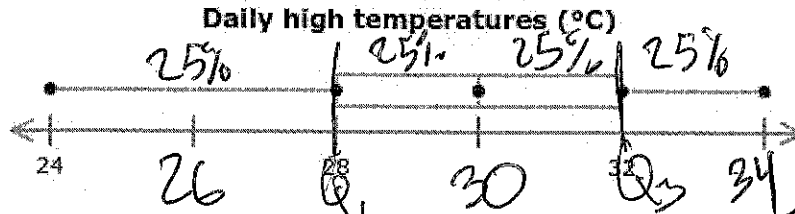


Day 3: Box Plots, Range, & Interquartile Range (IQR)

#5

**Warm-up:**

Recently, the weatherman has reported the high temperature in Middletown each and every day. This box-and-whisker plot shows the results.



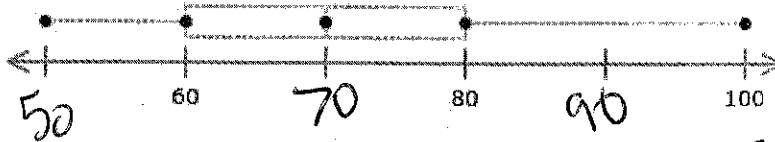
What percent of the high temperatures were 28°C or hotter?

0%	25%	50%
<b>75%</b>	100%	

Range:  $34 - 24 = 10$   
 IQR:  $32 - 28 = 4$

The water company that serves Oak Grove is rolling out a new water saving program, but in order to be effective, they need to target customers that pay a certain amount on their bills. They start by reviewing how much customers paid on their December bills. This box-and-whisker plot shows the results.

Water bill for December (\$)



What is the value of the upper quartile?

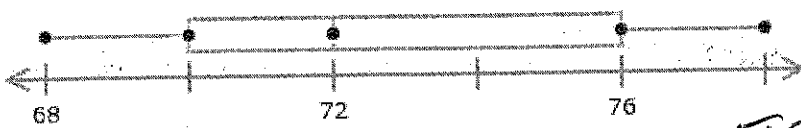
\$

Q3

Range:  $100 - 50 = 50$   
 IQR:  $80 - 60 = 20$

A statistician is collecting data on heights of basketball players over the years. This box-and-whisker plot shows the results.

**Basketball players' heights (inches)**



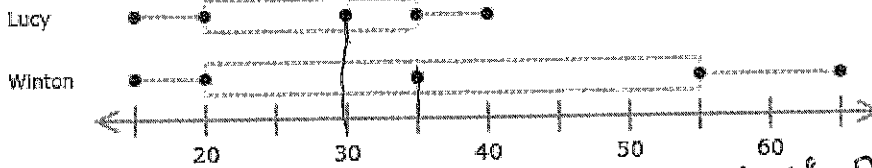
$R = 78 - 68 = 10$   
 $IQR = 76 - 70 = 6$

What is the value of the upper quartile?

76 inches

Two friends in Mrs. Burnett's class, Lucy and Winton, wanted to compare how much time they each spent studying for her class over the course of a few days. These box-and-whisker plots show the results.

**Time spent studying each evening**



$L: R = 40 - 15 = 25$   
 $IQR = 35 - 20 = 15$

$W: R = 65 - 15 = 50$   
 $IQR = 55 - 20 = 35$

Which student has a lower median?

Lucy                      Winton