

84.) a. Smallest spread = 4th quartile
spread = 1 unit

b. Largest spread = 2nd quartile
spread = 8 units

c. IQR = 10

d. More data in interval 10-13.
 $5-10 < 25\%$
 $10-13 = 50\%$

e. Interval 2-4 has the least
because it is only a portion
of the 2nd quartile.

85.) a) There are more children, because
children 17 and under make
up the entire 1st quartile,
while senior citizens (age 65 and
older) make up a fraction of
the 4th quartile.

$$85. b.) 100\% - 25\% = 75\%$$

$$75\% - 12.6\% = 62.4\%$$

$$\boxed{\approx 62.4\%}$$

86. a.) The survey of 20 year olds in Germany ^{shows us} ~~implies~~ that $\frac{1}{4}$ or 25% of the 20 year olds visit up to 4 countries in their lifetime, 25% visit 4-8 countries in their lifetime, 25% visit exactly 8, and 25% visit 8-11 countries. The same survey shows us that 25% of 20 year olds in the U.S. visit 2 foreign countries in their lifetime, 25% say they visit up to 2 countries, 25% visit 2-5 countries, and 25% visit 5-11 countries.

99. a.) ~~an~~ The Shape of the BMW 3 series box plot implies that the majority of buyers are younger than 40 years old.

b.) The three box plots, when compared to each other, imply that the older buyers are more interested in the newer BMWs.

d.) BMW 5 series smallest spread = 2nd quartile.
Spread \approx 39-41 year olds

e.) Largest ~~an~~ spread = 3rd Q \approx 41-55

f.) More data in 31-38, because

it is about 25% while there is

only $< 25\%$ in 45-55.

h.) ~~an~~ The fewest data is in 31-35

because it makes up $< 25\%$,

i.) See attached screenshot.