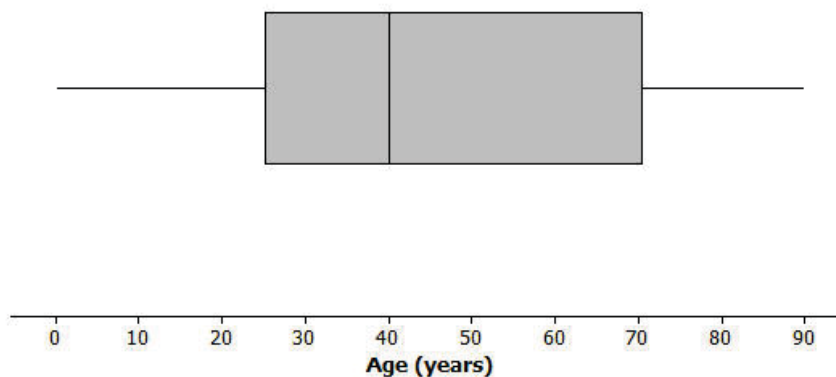


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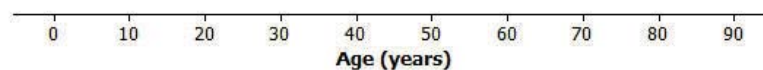
Homework Problem Set Sample Solutions

The following box plot summarizes ages for a random sample from a made-up country named Math Country.

Boxplot of Ages for Sample From Math Country



1. Make up your own sample of forty ages that could be represented by the box plot for Math Country. Use a dot plot to represent the ages of the forty people in Math Country.



Many possible dot plots would be correct. Analyze individually. Ten of the ages need to be between 0 and 25 years old, ten of the ages need to be between 25 and 40 years old, ten of the ages need to be between 40 and 70 years old, and ten of the ages need to be between 70 and 90 years old.

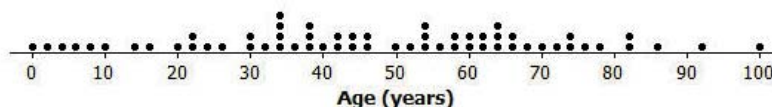
2. Is the sample of forty ages represented in your dot plot of Math Country the only sample that could be represented by the box plot? Explain your answer.

There are many possible dot plots that might be represented by this box plot. Any data set with the same 5-number summary would result in this same box plot.

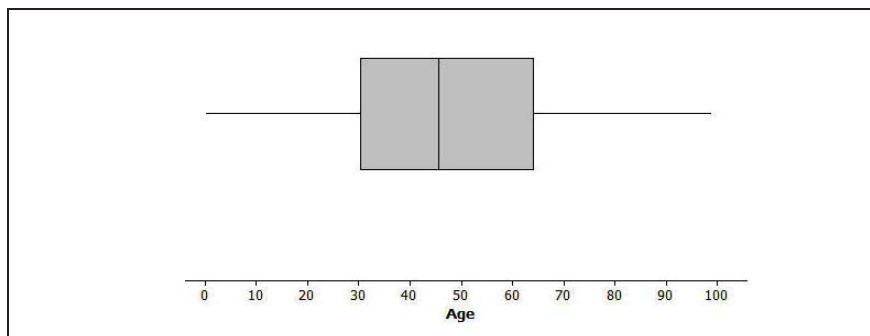
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3. The following is a dot plot of sixty ages from a random sample of people from Japan in 2010.

Draw a box plot over this dot plot.



The following is the box plot of the ages of the sample of people from Japan:



4. Based on your box plot, would the median age of people in Japan be closer to the median age of people in Kenya or the United States? Justify your answer.

The median age of Japan would be closer to the median age of the United States than to the median age of Kenya. The box plot indicates that the median age of Japan is approximately 45 years old. This median age is even greater than the median age of the United States.

5. What does the box plot of this sample from Japan indicate about the possible differences in the age distributions of people from Japan and Kenya?

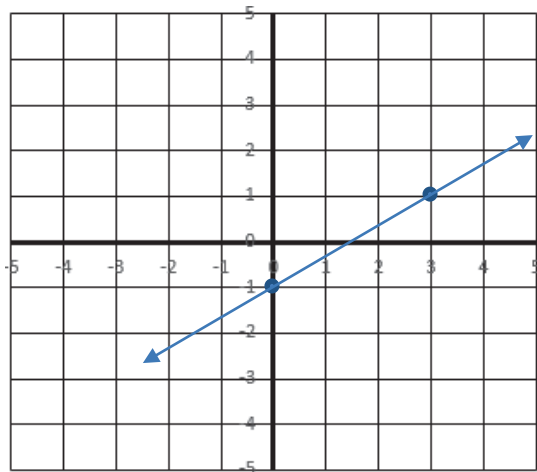
A much greater percent of the people in Japan are in the older age groups than is the case for Kenya.

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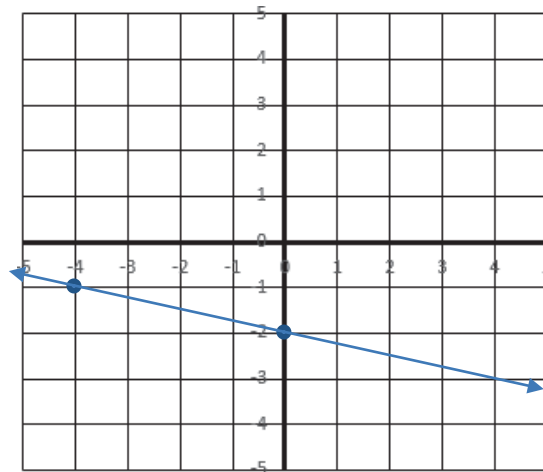
REVIEW – Slope and Graphing Lines

6. Draw the graph of the line given a point on the line and the slope of the line.

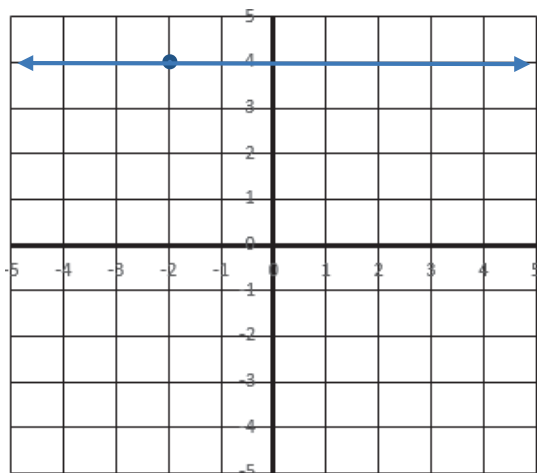
A. Slope = $\frac{2}{3}$ and point A (3, 1)



B. Slope = $-\frac{1}{4}$ and point B (0, -2)



C. Slope = 0 and point C (-2, 4)



D. Slope = 2 and point D (-3, -4)

