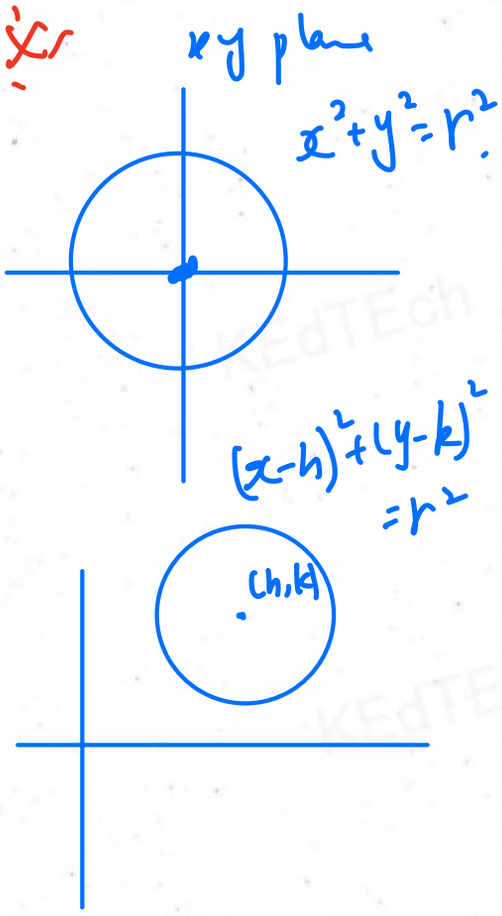
4

A fish hatchery has three tanks for holding fish before they are introduced into the wild. Ten fish weighing less than 5 ounces are placed in tank A. Eleven fish weighing at least 5 ounces but no more than 13 ounces are placed in tank B. Twelve fish weighing more than 13 ounces are placed in tank C. Which of the following could be the median of the weights, in ounces, of these 33 fish?

A) 4.5
B) 8
C) 13.5
D) 15

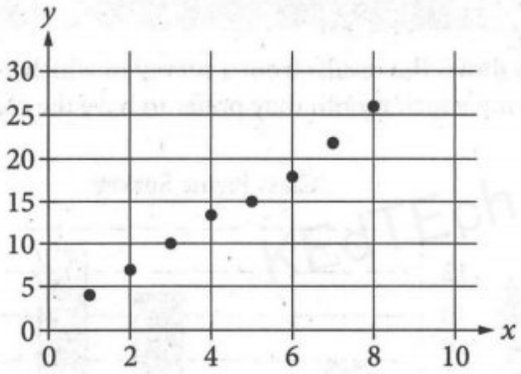


5

A data set of 27 different numbers has a mean of 33 and a median of 33. A new data set is created by adding 7 to each number in the original data set that is greater than the median and subtracting 7 from each number in the original data set that is less than the median. Which of the following measures does NOT have the same value in both the original and new data sets?

A) Median
B) Mean
C) Sum of the numbers
D) Standard deviation

6



Which of the following could be the equation for a line of best fit for the data shown in the scatterplot above?

A) $y = 0.8 + 3x$
B) $y = 3 + 0.8x$
C) $y = 3 - 0.8x$
D) $y = 0.8 - 3x$

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7

A sample of 40 4th-grade students was selected at random from a certain school. The 40 students completed a survey about the morning announcements, and 32 thought the announcements were helpful. Which of the following is the largest population to which the results of the survey can be applied?

A) The 40 students who were surveyed
B) All 4th-grade students at the school
C) All students at the school
D) All 4th-grade students in the county in which the school is located

8

In which of the following tables is the relationship between the values of x and their corresponding y-values nonlinear?

A)

x	1	2	3	4
y	8	11	14	17

B)

x	1	2	3	4
y	4	8	12	16

C)

x	1	2	3	4
y	8	13	18	23

D)

x	1	2	3	4
y	6	12	24	48

9

A bag containing 10,000 beads of assorted colors is purchased from a craft store. To estimate the percent of red beads in the bag, a sample of beads is selected at random. The percent of red beads in the bag was estimated to be 15%, with an associated margin of error of 2%. If r is the actual number of red beads in the bag, which of the following is most plausible?

A) $r > 1{,}700$
B) $1{,}300 < r < 1{,}700$
C) $200 < r < 1{,}500$
D) $r < 1{,}300$

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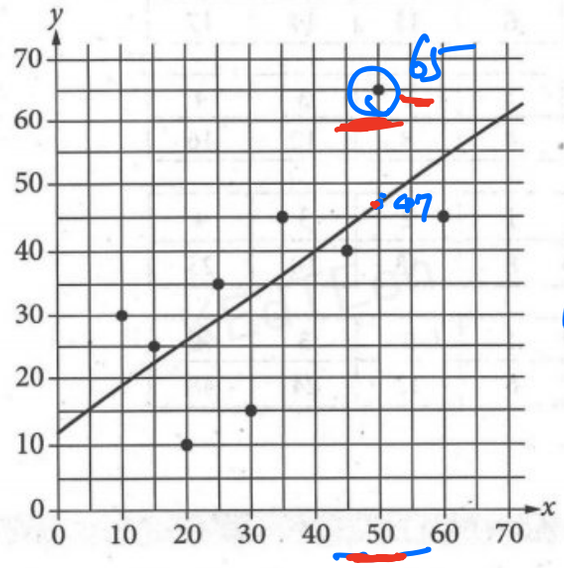
10

The table summarizes the distribution of people in a certain city by age group.

Age group	Percent
Less than 18 years old	27%
18–40 years old	22%
41–65 years old	26%
Greater than 65 years old	25%

If a person in this city is selected at random, what is the probability of selecting a person who is greater than 65 years old, given that the person is at least 18 years old? (Express your answer as a decimal or fraction, not as a percent.)

11



The scatterplot in the xy-plane above shows nine points (x, y) and a line of best fit. Of the following, which best estimates the amount by which the line underestimates the value of y when $x = 50$?

A) 8

B) 10

C) 13

D) 18

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12

Sample	Percent in favor	Margin of error
A	52%	4.2%
B	48%	1.6%

The results of two random samples of votes for a proposition are shown. The samples were selected from the same population, and the margins of error were calculated using the same method. Which of the following is the most appropriate reason that the margin of error for sample A is greater than the margin of error for sample B?

A) Sample A had a smaller number of votes that could not be recorded.
B) Sample A had a higher percent of favorable responses.
C) Sample A had a larger sample size.
D) Sample A had a smaller sample size.

13

The number of crane flies in a wildlife sanctuary is 30% less than the number of ladybugs in the sanctuary. The number of honeybees in the sanctuary is 85% greater than the number of crane flies in the sanctuary. The number of honeybees in the sanctuary is how many times the number of ladybugs in the sanctuary?

1.295

14

The positive number a is 210% of the number b, and a is 30% of the number c. If c is p% of b, what is the value of p?

700

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