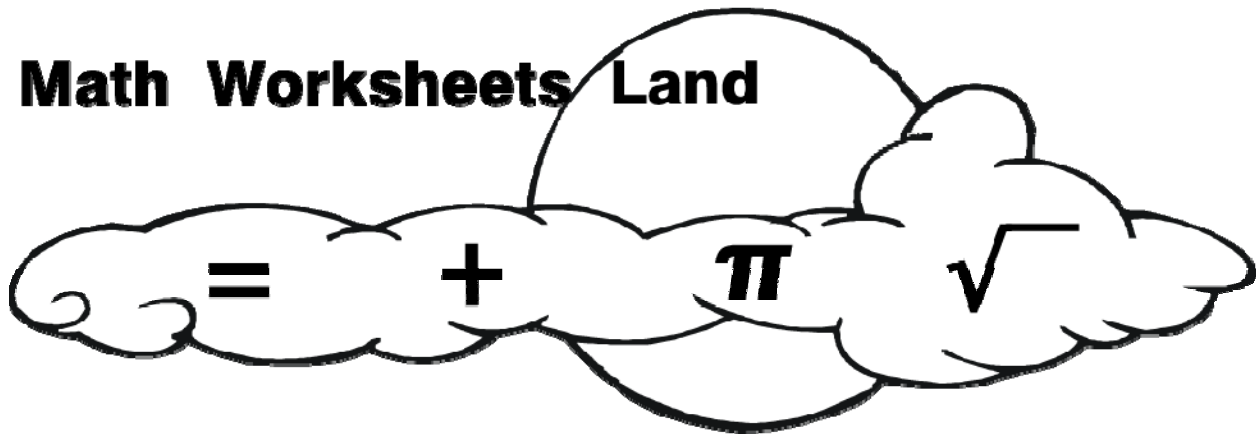


High School Statistics and Probability

Common Core Sample Test Version 1

Math Worksheets Land



Our High School Statistics and Probability sample test covers the twenty most common questions that we see targeted for this level. For complete tests and break downs of each section, please check out web site listed below.

High School Statistics and Probability Common Core Math Tests:

<http://www.mathworksheetsland.com/tests/hsstatsandprob.html>

For Full Statistics and Probability Worksheets, Quizzes, and Homework Samples:

<http://www.mathworksheetsland.com/stats/>

Name _____

Date _____

Q1. In the data set below, what is the mean absolute deviation?

6, 5, 7, 2, 4, 8

Q2. The following table shows the number of visitors to a museum.

Day	Number of visitors
Monday	285
Tuesday	273
Wednesday	295
Thursday	154
Friday	297

If the outlier numbers are not included, what is mean number of visitors every day?

Q3. Consider the following table which shows the number of boys and girls who participated in different sports in a college event.

Sport	Girls	Boys
Soccer	38	81
Baseball	62	101
Basketball	87	115



What percentage of boys participated in baseball?



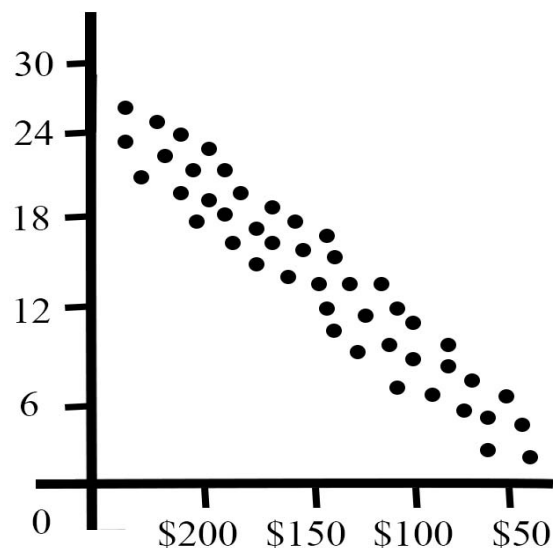
Name _____

Date _____

Q4. Jen covers 60 meters every 30 seconds during her walk from school to home. If she carries on walking at the same rate, determine the function that represents the distance covered based on time, and then put it on the graph.

Q5. Jill had to do 100 questions in 120 minutes. After 60 minutes, she was able to complete 40 questions. Find the slope of line.

Q6. The following graph shows how much money Annie had during a month.



What type of correlation does the data in above graph represents?



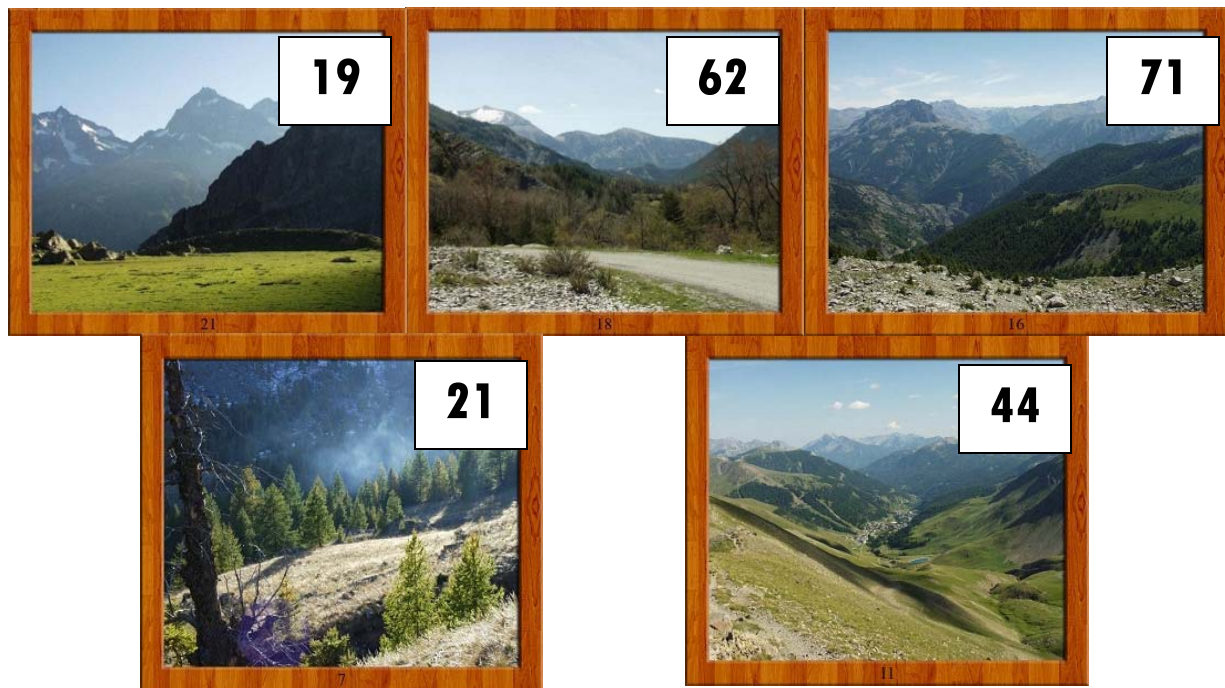
Name _____

Date _____

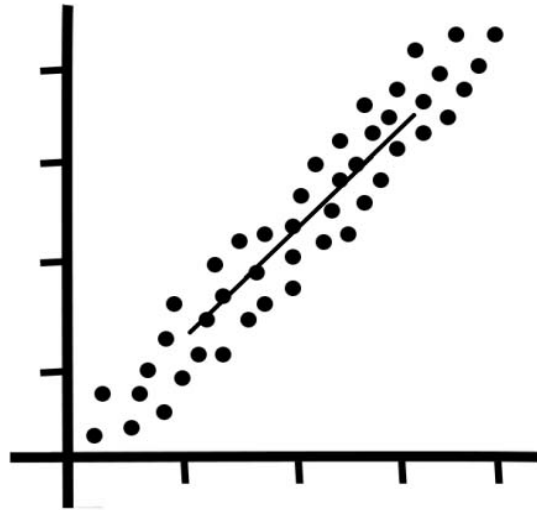
Q7. If random selection occurred only among male students that had an excellent academic background, what type of sampling is this?

Q8. A research survey was conducted to know the opinion of students about new policies implemented by the college administration. The survey had a confidence level of 95% with a margin of error of 2. Also, 20% students supported the policies. How many students were surveyed?

Q9. Mary went to buy a frame. She shortlisted five frames and she had to select one of them. What is the probability of getting a frame with a prime number?



Q10. Does the following scattered graph show a positive, negative or no trend?



Q11. John rolls two fair dice, one green and one blue. Let A denote the event that the green die shows an even number. Let B denote the event that the blue die shows 5 or 6. Are the events A and B dependent or independent?

Q12. In a single throw of two fair dice, what is the probability that the sum of two dice will be 7, given that the two dice have the same outcome?



Name _____

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Q13. There are 15 items present in a room, 4 of which are defective and 11 are in good condition. Two items are selected. What is the probability that the first is good and the second defective?

Q14. A company consists of four members. How many sample points are in the sample space when three officers: president, vice president and secretary are to be chosen?



Q15. Nikki tosses 3 balanced coins. Let X be the random variable "number of heads". Find the probability distribution.



Q16. A Japan-based digital camera producers found the risk of an allergic reaction (rash) due to the rubber grip of their XX model camera. Based on sales data, an estimated 68,200 units of cameras were sold. The owner of the company must make a most cost-effective decision to fix the issue. If you are in that position, which choice below would be the most cost effective?

A. Recall all the sold cameras and change the old rubber grip with a new safer one. The financials behind this method include:

- The cost for each new rubber grip would be \$40
- Service charge for the employer fixing the problem would be \$20
- The cost to contact each customer to make the fix would be \$1
- A fine of \$200,000 to be paid for Consumer Product Safety Commission
- An average of 90% customers avail the facility of fixing the problem

B. Contact each customer and ask them to provide the postal address to send an extra cap around the rubber grip to avoid direct contact with the consumer's skin (the extra cap can be easily fitted by consumer).

- The cost for each new cap would be \$20
- The postal charge for sending cap would be \$10
- The cost to contact each customer to make the fix would be \$1
- A fine of \$200,000 to be paid for Consumer Product Safety Commission
- An average of 95% customers avail the facility of fixing the problem



Name _____

Date _____

Q17. John had saved \$100 from his salary. He got an idea of depositing the money in a bank for one year to get the benefit of interest. He came across two banks: Bank A offered interest of 3% of deposited amount for each month; Bank B offered 16% of deposited amount for whole one year. If John asked you to help him choose a bank, which one will you suggest?

Q18. Marco has \$1,000. He wants to invest in the stock market. He purchased 50 shares each costing \$20. There is a 60% probability of increasing the share value by \$10 in 1 month and there is a 40% probability of decreasing the share value by \$5 in 1 month. What is the expected payoff after 1 month?



Name _____

Date _____

Q19. In a college of 1000 students, Michael got 75% of votes in a college representative election. Thus, the probability that a randomly selected student voted for Michael phone is _____? Is this estimated probability or empirical probability?

Q20. To increase the sales of motor bikes, a manufacturing company announced a prize valued at \$20,000 as first prize for 3 people and \$7,500 as second prize for 5 people selected through a random manner. The company successfully sold 10,000 motor bikes. The cost of each motor bike is \$2,000. What is the expected value if you buy 1 motor bike?



Name _____

Date _____

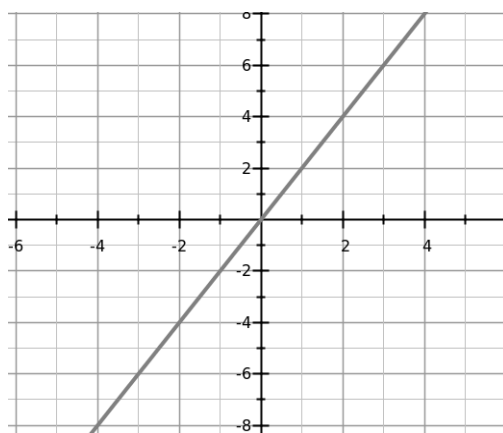
ANSWER KEYS

Q1. 1.71

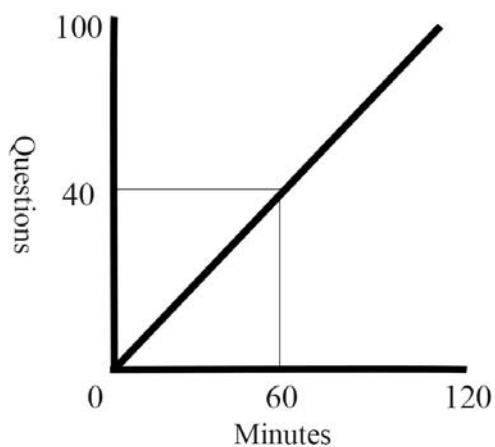
Q2. 287.5

Q3. 34%

Q4. $y = 2x$



Q5. 0.66



Name _____

Date _____

Q6. Negative

Q7. Stratified Samples

Q8. 1538

Q9. $2/5$

Q10. Positive

Q11. Independent

Q12. 0

Q13. $22/105$

Q14. ${}^4P_3 = 24$

Q15.

No of Heads	0	1	2	3
Probability	$1/8$	$3/8$	$3/8$	$1/8$

Q16. Option B

Q17. Bank A

Q18. 200

Q19. A. $750/1000 = 0.75$

B. Actual/empirical probability

Q20. -\$1990.25

