1. Out of 5.5 billion bacteria grown for an experiment, 1 in 75 million has a particular mutation. Approximately how many of the bacteria have the mutation?
    A. 7
    B. 73
    C. 733
    D. 7,333
    E. 73,333

2. $a - b > a + b + c$

Quantity A	**Quantity B**
$2b + c$	$b + c$

3. a, b, and c are positive even integers such that $8 > a > b > c$

Quantity A	**Quantity B**
The range of a, b, and c	The average of a, b, and c

4. $f(x) = 2x - 3$, $f(m) = -11$

Quantity A	**Quantity B**
The value of m	Half the value of f(m)

5. Red chips all have the same value as one another, blue chips all have the same value as one another, and yellow chips also all have the same value as one another. If the value of red chip plus a blue chip is 4.25, the value of a blue chip plus a yellow chip is 2.75, and the value of a red chip plus a blue chip plus a yellow chip is 4.5, what is the value of a red chip plus a yellow chip?
    A. 0.25
    B. 2
    C. 2.25
    D. 2.75
    E. 3

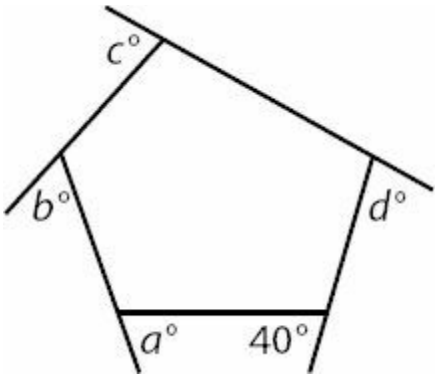
6. At Florence Pizza, the only slices of pizza available are plain and pepperoni, which cost $1.50 and $2.00 respectively. Small, medium, and large cups of soda cost $1.00, $1.50, and $1.75 respectively. Which of the following could be the total cost of two slices of pizza and two sodas?
   □$5.00
   □$5.25
   □$6.00
   □$6.25
   □$7.25

7. Workers at Companies X and Y are paid the same base hourly rate. Workers at Company X are paid 1.5 times the base hourly rate for each hour worked per week in excess of the first 37, while workers at Company Y are paid 1.5 times the base hourly rate for each hour worked per week in excess of the first 40. In a given week, how many hours must a Company X worker work in order to receive the same pay as a Company Y worker who works 46 hour?
   A. 46
   B. 45
   C. 44
   D. 43
   E. 42

8. Steve plans to construct a 1-meter radius circle shape pool in an 8-meter x 10-meter garden. What is the probability that the pool does not exceed the range of the garden?

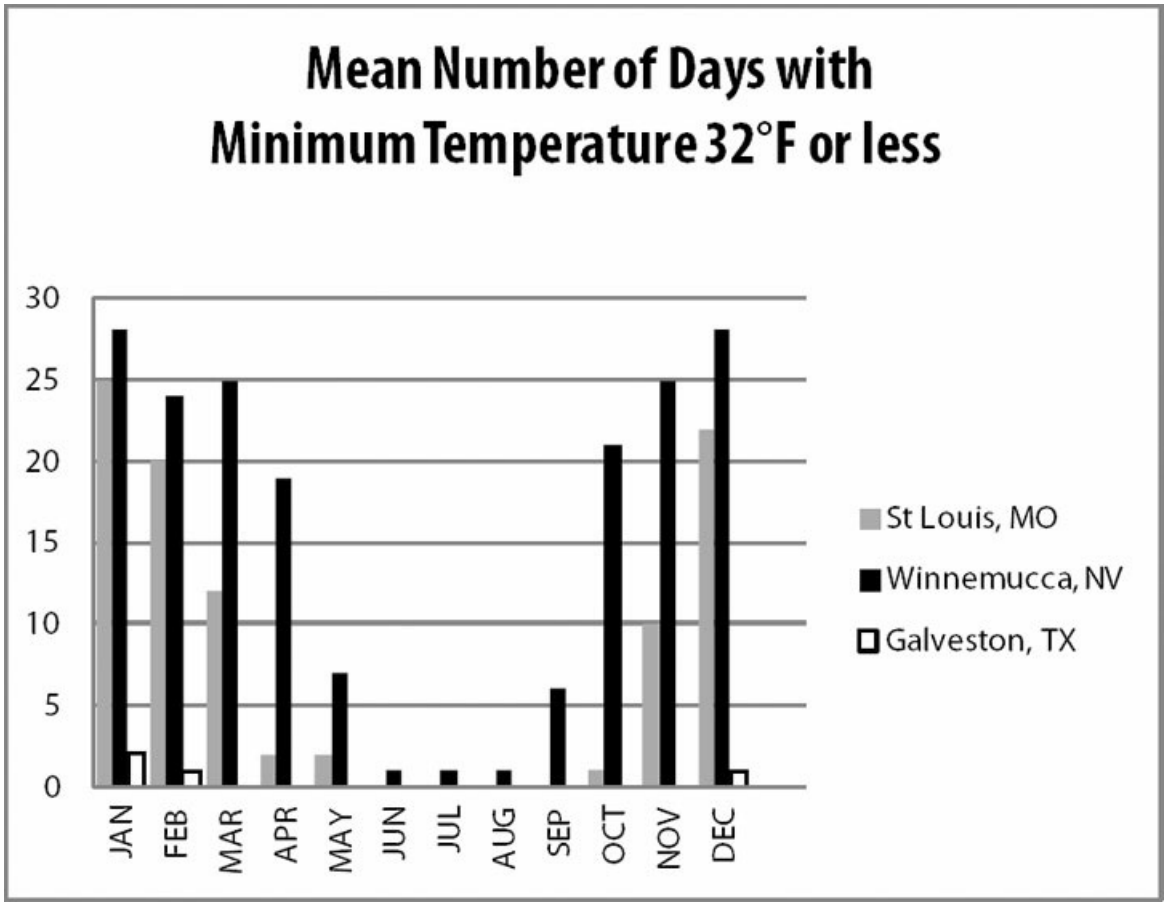
9. In a club, 26 members went to England, 26 members went to France, and 32 members went to Italy. None of them went to both England and France. Six members went to both England and Italy. Eleven members went to both France and Italy. How many members went to at least one of the nations?
   A. 65
   B. 66
   C. 67
   D. 68
   E. 69

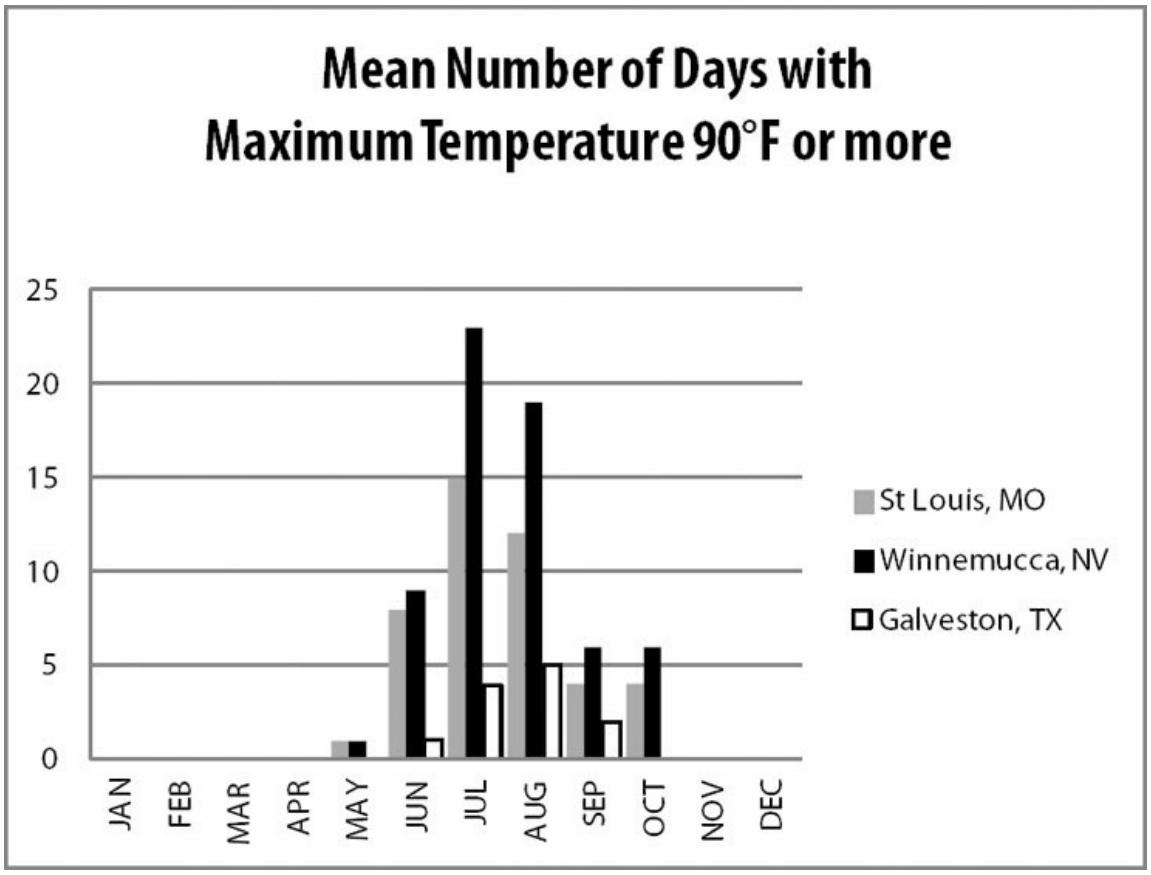
10. What is the value of a + b + c + d?



A. 240
B. 320
C. 360
D. 500
E. 540

Question 11 – 14 refer to the following graph





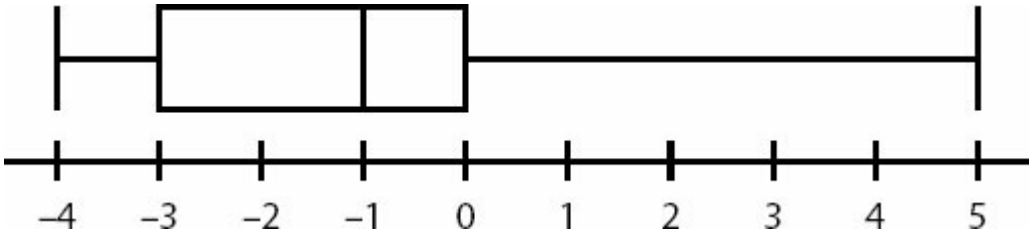
11. In how many months of the year were there more than 20 days with temperatures 32° F or less in Winnemucca?
    A. 2
    B. 3
    C. 4
    D. 6
    E. 7

12. On how many days in the entire year did the temperature in Galveston rise to at least 90° F or fall to, or below, 32° F?
    A. 11
    B. 16
    C. 28
    D. 42
    E. 59

13. Approximately what percent of the days with maximum temperature of 90°F or more in St. Louis occurred in July?
    A. 6%
    B. 15%
    C. 17%
    D. 34%
    E. 44%

14. The number of freezing January days in Winnemucca was approximately what percent more than the number of freezing January days in St. Louis? (A "freezing" day is one in which the minimum temperature is 32°F or less.)
    A. 3%
    B. 6%
    C. 12%
    D. 24%
    E. 28%

15. Which of the following sets of data applies to this graph?



    A. -4, -4, -2, 0, 0, 5
    B. -4, 1, 1, 3, 4, 4
    C. -4, -4, -3, 1, 5
    D. -5, 3, 4, 5
    E. -4, -4, -2, -2, 0, 0, 0, 5

16. A stockbroker has made a profit on 80% of his 40 trades this year.

Quantity A	Quantity B
23	The maximum number of consecutive trades that the stockbroker can lose before his profitable trades drop below 50% for the year

17. If k is a multiple of 24 but not a multiple of 16, which of the following cannot be an integer?
    A. k/8
    B. k/9
    C. k/32
    D. k/36
    E. k/38

18. Set S is a set of distinct positive integers. The standard deviation of Set S must increase if which of the following were to occur?
    □Each number in the set is multiplied by ½.
    □The smallest number is increased to become equal to the median.
    □The smallest number is increased to become larger than the current largest number.
    □The largest number is doubled.

19. How many 10-digit numbers can be formed using only the digits 2 and 5?
    A. 2^{10}
    B. 22*5!
    C. 5!*5!
    D. 10!/2
    E. 10!

20. If x is a positive integer, what is the units digit of $24^{5+2x}36^{6}17^{3}$?
    A. 2
    B. 3
    C. 4
    D. 6
    E. 8

B
D
C
A
B
ACDE
B
3/5
67
320
6
16
34%
12%
E
B
C
D
A
2