

7th grade state assessment review

1. The depth of snow at seven different mountain lodges is 18 inches, 20 inches, 26 inches, 22 inches, 85 inches, 18 inches, and 24 inches.

- a. Find the range, median, and mode.
- b. Which measure is the most useful for predicting how deep the snow will be at an 8th lodge?

a. a. range: 67 in.
 median: 22 in.
 mode: 18 in.
 b. The median is the most useful.

b. a. range: 65 in.
 median: 30.4 in.
 mode: 18 in.
 b. The median is the most useful.

c. a. range: 67 in.
 median: 30.4 in.
 mode: 18 in.
 b. The range is the most useful.

d. a. range: 65 in.
 median: 22 in.
 mode: 18 in.
 b. The mode is the most useful.

2. Pick the list of the data represented by the stem-and-leaf plot below.

1	5 6 8
2	1 5 6
3	1 9

Key: 2|0 = 20

- a. 51, 61, 81, 12, 52, 62, 13, 93
- b. 15, 16, 18, 21, 25, 26, 31, 39
- c. 5, 6, 8, 1, 5, 6, 1, 9
- d. 15, 16, 18, 12, 52, 62, 13, 93

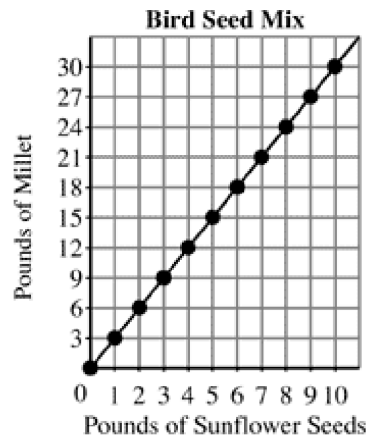
3. Find the median and the mode of the data in the stem-and-leaf plot below

1	2 3 6 7
2	1 3 5
3	3 5 5 7 8 9

Key: 2|3 = 23

- a. median = 5.5 , mode = 5
- b. median = 25 , mode = 35
- c. median = 23 , mode = 35
- d. median = 33 , mode = 35

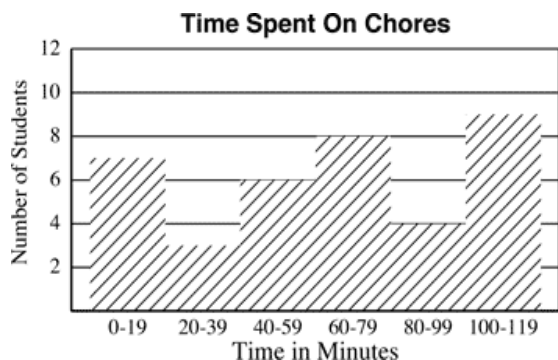
4. John is mixing bird seed. If John has 8 pounds of sunflower seeds, how many pounds of millet should he add, according to the graph below?



- a. 24 pounds
- b. 9 pounds
- c. 27 pounds
- d. 8 pounds

5. The data represent final exam scores for students in an Algebra 2 class.
 93, 54, 86, 81, 69, 82, 82, 85, 75, 70, 58, 69, 99, 59, 67, 99, 73, 69, 69, 95
- Make an ordered stem-and-leaf plot of the data.
 - If the top three students get an A, what is the cutoff score for an A?

6. The histogram shows the number of minutes students at Montrose Junior High typically spend on household chores each day. About how many students spend 20-39 minutes on chores?



- 9 students
- 4 students
- 3 students
- 8 students

Order the fractions from least to greatest.

7. $\frac{1}{4}, \frac{3}{8}, \frac{7}{12}, \frac{5}{16}$
- $\frac{1}{4}, \frac{5}{16}, \frac{3}{8}, \frac{7}{12}$
 - $\frac{7}{12}, \frac{3}{8}, \frac{1}{4}, \frac{5}{16}$
 - $\frac{1}{4}, \frac{3}{8}, \frac{7}{12}, \frac{5}{16}$
 - $\frac{1}{4}, \frac{3}{8}, \frac{5}{16}, \frac{7}{12}$

Order the integers from least to greatest.

8. 6, -9, -6, 14, 16
- 16, 14, 6, -6, -9
 - 16, 14, -6, 6, -9
 - 9, -6, 6, 14, 16
 - 9, -6, 6, 16, 14

9.

Order the rational the numbers in order from least to greatest?

- $0.42, \frac{4}{5}, 1.18, 1.60$
- $1.18, 0.42, 1.60, \frac{4}{5}$
- $0.42, \frac{4}{5}, 1.60, 1.18$
- $1.18, 1.60, 0.42, \frac{4}{5}$

Order the rational numbers from least to greatest.

10. $-6.25, 0.32, -\frac{14}{5}, \frac{3}{4}, -2\frac{1}{2}$
- $0.32, \frac{3}{4}, -2\frac{1}{2}, -\frac{14}{5}, -6.25$
 - $-6.25, -2\frac{1}{2}, -\frac{14}{5}, 0.32, \frac{3}{4}$
 - $0.32, \frac{3}{4}, -\frac{14}{5}, -2\frac{1}{2}, -6.25$
 - $-6.25, -\frac{14}{5}, -2\frac{1}{2}, 0.32, \frac{3}{4}$

Write the fraction as a decimal.

11. $\frac{3}{8}$
- 0.375
 - 2.66667
 - 0.83
 - 3.08

Write the decimal as a mixed number.

12. 3.45

- a. $3 \frac{9}{20}$
- b. $3 \frac{69}{200}$
- c. $3 \frac{3}{5}$
- d. $3 \frac{9}{10}$

Evaluate the expressions.

13. $8(8 + 5) + 2$

- a. 208
- b. 120
- c. 71
- d. 106

14. $-5 + 7 + (-4)$

- a. -16
- b. -6
- c. -2
- d. 2

15. $-3 + a$, when $a = 3$ and

- a. 0
- b. -6
- c. 6
- d. -9

16. $a - b + c$, when $a = 12$, $b = 2$, and $c = 10$

- a. 0
- b. 20
- c. 4
- d. 24

17. $14 - 23$

- a. 9
- b. -9
- c. 37
- d. -37

18. $-12 - 14$

- a. 2
- b. 26
- c. -26
- d. -2

19. $6 - (-8)$

- a. -2
- b. 48
- c. 14
- d. 2

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20. The temperature at 8:00 A.M. was 15°C . Over the next 8 hours the temperature rose 4°C , dropped 2°C , rose 4°C , rose 4°C , dropped 1°C , rose 1°C , dropped 1°C , and dropped 4°C . What was the temperature at 4:00 P.M.?

- a. 19°C
- b. 22°C
- c. 21°C
- d. 20°C

21. $-6(-10)$

- a. -60
- b. 70
- c. -70
- d. 60

22. $-20 \div (5)$

- a. $-\frac{1}{4}$
- b. -4
- c. 4
- d. $\frac{1}{4}$

Evaluate the expression for the given value(s) of the variable(s).

23. $-xy$, when $x = -7$ and $y = -6$

- a. -42
- b. 13
- c. 42
- d. -13

Write the verbal phrase as a variable expression. Let x represent the number.

24. 8 plus a number
- $8 - x$
 - $x - 8$
 - $8 + x$
 - none of these
25. Write an expression for "three times the difference of a number x and 5."
- $3x - 5$
 - $3(x + 5)$
 - $3(x - 5)$
 - $3(5 - x)$
26. Which sentence is represented by $7e = 63$?
- The number sixty-three is nine times another number.
 - A number multiplied by seven is sixty-three.
 - A number increased by seven is sixty-three.
 - The number sixty-three is seven more than another number.
27. Doug owns 5 times as many state quarters as Lemont. Doug owns 90 state quarters. How many state quarters does Lemont own? Write your equation first, then solve the problem!
- 18
 - none of these
 - 85
 - 450
28. A shipping service charges \$0.43 for the first ounce and \$0.29 for each additional ounce of package weight. Write an equation to represent the price P of shipping a package that weighs x ounces, for any whole number of ounces greater than or equal to 1.
- $P = 0.29 + 0.43(x - 1)$
 - $P = 0.29 + 0.43x$
 - $P = 0.43 + 0.29(x - 1)$
 - $P = 0.43 + 0.29x$
29. The cost of renting a canoe is \$5.25, plus \$0.50 per hour for the time that the canoe is out. Which equation could be used to find C , the cost in dollars for using the canoe for H hours?
- $C = 5.25 + 0.50H$
 - $C = (5.25 + 0.50)H$
 - $C = 5.25 \times 0.50H$
 - $C + 0.50H = 5.25$
30. You are planning on buying a subwoofer that costs \$650. If you plan to save \$50 per month, how long will you have to save in order to purchase the subwoofer? Write your equation and then also find your answer.
- Equation:
- Solution:
31. **Simplify the expressions.**
- $4x + 6x$
- $10x^2$
 - $x + 10$
 - $10x$
 - $2x$
32. $-4x + 2 - 6x + 4$
- $-10x - 2$
 - $2x - 2$
 - $-10x + 6$
 - $2x + 6$
- Solve the equations.**
33. $4 + j = 10$
- 6
 - 12
 - 4
 - 5
34. $d - 6 = 30$
- 36
 - 26
 - 14
 - 24

35. $\frac{w}{3} = 2$

- a. $\frac{2}{3}$
- b. $\frac{3}{2}$
- c. 6
- d. $\frac{1}{6}$

36. $2x = 8$

- a. 16
- b. 2
- c. 4
- d. 6

37. $-3 + 3x = -6$

- a. -3
- b. -2
- c. -1
- d. -4

38. $-6x + 9 = -21$

- a. 5
- b. -5
- c. 2
- d. -2

39. $\frac{x}{4} + \frac{x}{4} = 5$

- a. 1
- b. 2
- c. 10
- d. 20

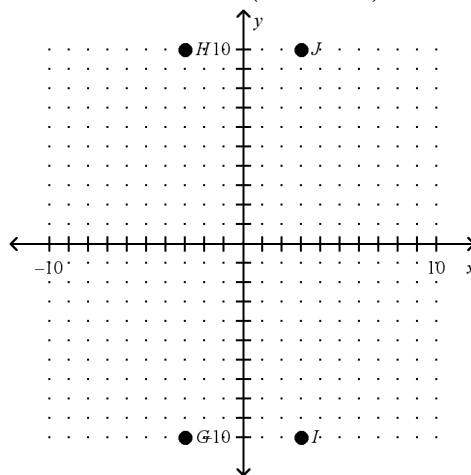
40. $\frac{3}{7}y - 8 = 7$

- a. 35
- b. $-2\frac{1}{3}$
- c. $6\frac{3}{7}$
- d. $-\frac{3}{7}$

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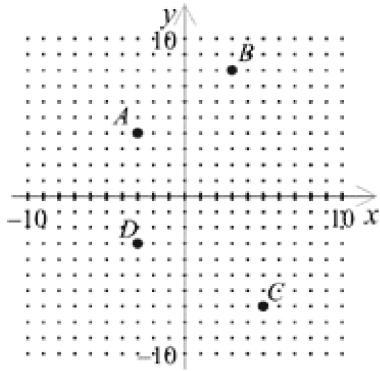


41. Name the point at $(-3, -10)$.



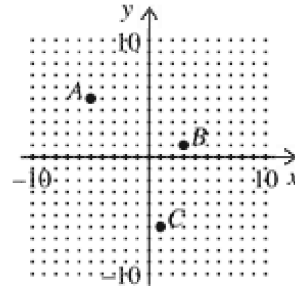
- a. *H*
- b. *G*
- c. *J*
- d. *I*

42. Find the distance between A and D.

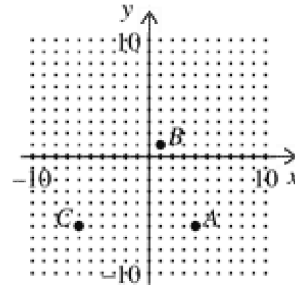


- a. 5
- b. 6
- c. 7
- d. 4

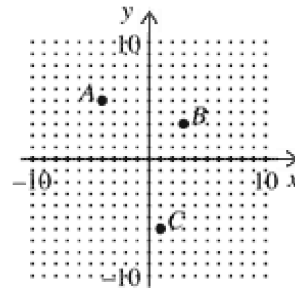
43. Graph the points $A(-5, 5)$, $B(3, 1)$, and $C(1, -6)$ on the same coordinate plane.



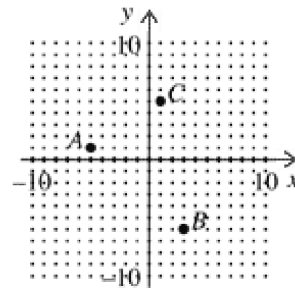
a.



b.

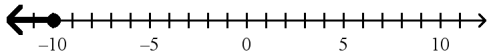


c.



d.

44. Which inequality is represented by the graph?



- a. $m \geq -10$
- b. $m \leq -10$
- c. $m < -10$
- d. $m > -10$

Write an inequality to represent the situation.

45. When a number is decreased by 3, the result is greater than 8.

- a. $x + 3 < 8$
- b. $x - 3 > 8$
- c. $x + 3 > 8$
- d. $x - 3 < 8$

46. You are planning a skating party at a rink that charges a basic fee of \$9.50 and \$5.00 per person for catered parties. You don't want to spend more than \$39.50. Write and then solve an inequality to find the number of people who can attend the party.

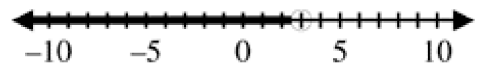
- a. $5x + 9.5 > 39.5$
- b. $5x + 9.5 < 39.5$
- c. $5x + 9.5 \geq 39.5$
- d. $5x + 9.5 \leq 39.5$

47. Solve the inequality. Then graph the solution.
 $4 + 4x < 16$

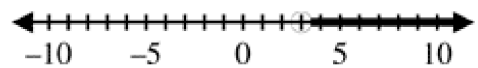
- a. $x < 4$



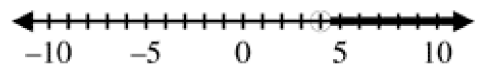
- b. $x < 3$



- c. $x > 3$



- d. $x > 4$



48. Which numbers are part of the solution set for the equation: $9x \geq 27$

- a. 3, 4, 5, 6
- b. 0, 1, 2, 3
- c. 9, 10, 11, 12
- d. 6, 7, 8, 9

49. Write the percent as a fraction in simplest form.
6%

- a. $\frac{3}{50}$
- b. $\frac{60}{100}$
- c. 0.06
- d. $\frac{3}{25}$

50. Write the fraction as a decimal. $\frac{11}{25}$

- a. 0.044
- b. 0.22
- c. 0.44
- d. 0.0044

51. Write the percent as a decimal. 0.575%
- 5.75
 - 0.575
 - 57.5
 - 0.00575
52. Of every 4 hot dogs Esther sold, 1 had relish. What percent had relish?
- 25%
 - $\frac{1}{4}\%$
 - 0.25%
 - 2.5%
53. Write the decimal as a percent. 0.09
- 9%
 - $\frac{9}{100}\%$
 - 0.0009%
 - 0.09%
54. Lucy received the results of a test she took in math class. The ratio of the number of correct answers to the total number of questions is 4 to 25. Express this ratio as a percent and a fraction.
- 116%; $\frac{29}{25}$
 - 16%; $\frac{4}{25}$
 - 84%; $\frac{21}{25}$
 - 96%; $\frac{24}{25}$
55. What percent of 250 is 20?
- $12\frac{1}{2}\%$
 - 8%
 - 11%
 - 5%
56. 56 is 70% of what number?
- 8
 - 4
 - 39
 - 80
57. What number is 0.6% of 500?
- 30
 - 3
 - 300
 - 0.3
58. The regular price of a coat is \$60. It is on sale at 17% off. What is the amount of the discount?
- \$43.00
 - \$49.80
 - \$17.00
 - \$10.20
59. A certain tennis racquet at Bob's Tennis Racquet Emporium costs \$105. With a sales tax of 6%, what is the total cost of the racquet?
- \$111.30
 - \$22.05
 - \$16.40
 - \$131.50
60. Tom is buying a used car and needs to have a down payment of 15%. If the car Tom wants to buy costs \$4200, how much down payment will he need?
- \$3570
 - \$2700
 - \$1500
 - \$630

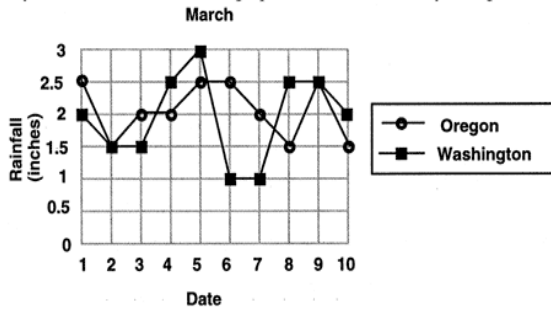
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61. Two machines can complete 6 tasks every 5 days. Let t represent the number of tasks these machines can complete in a 30-day month. Give a proportion that represents this situation.
- $\frac{5}{30} = \frac{t}{6}$
 - $\frac{5}{6} = \frac{t}{30}$
 - $\frac{6}{5} = \frac{t}{30}$
 - $\frac{30}{12} = \frac{t}{5}$

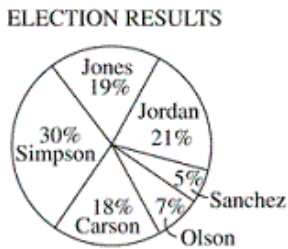
62. A worker in an assembly line takes 5 hours to produce 22 parts. At that rate, how many parts can she produce in 10 hours?
- 44 parts
 - 220 parts
 - 5 parts
 - 88 parts

63. The double line graph below compares rainfall in Washington and Oregon during the first 10 days of March 1993. Use the graph to determine the highest rainfall in Washington



- 2.5
- 5
- 3
- none of the above

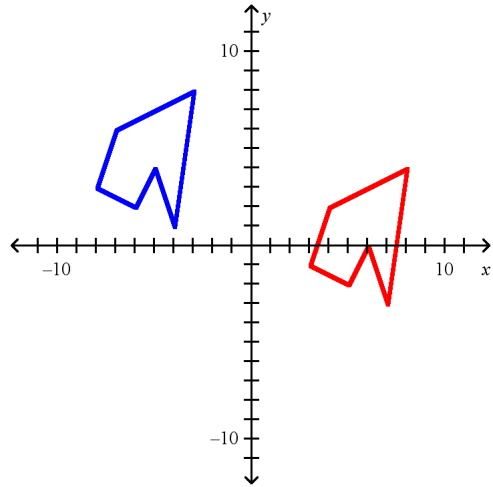
The following circle graph shows the results from the elections for city council among six different candidates.



64. What percent of the people did *not* vote for Jones?
- 89%
 - 91%
 - 81%
 - 71%

Identify the transformation. If it is a rotation, give the angle of rotation.

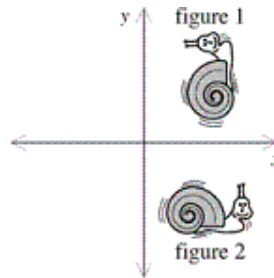
65.



- rotation, 90°
- translation
- rotation, 180°
- reflection

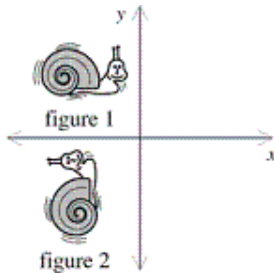
Match the figure with the correct rotation description to get from figure 1 to figure 2.

66.



- 90° clockwise
- 180° counterclockwise
- 270° clockwise
- none of these

67.



- a. 90° clockwise
- b. none of these
- c. 180° clockwise
- d. 270° counterclockwise

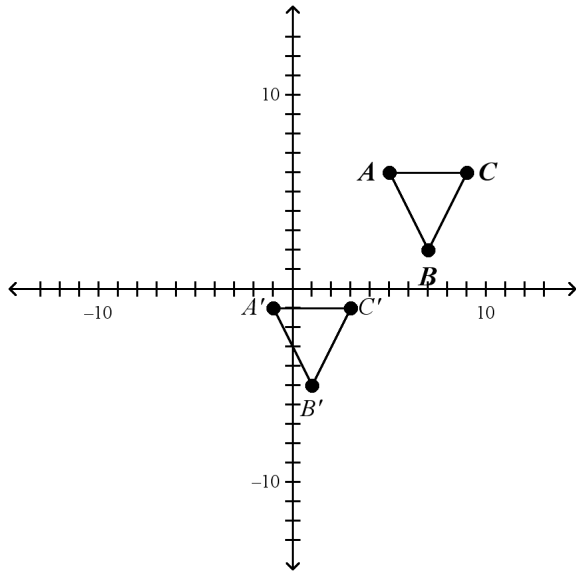
68. Louise wanted to compare the length of the last name of the students in Mr. Collin's Class to the length of the last name of the students in Mrs. Klein's Class. She recorded the name lengths for both classes. The results are shown below.

Name Length	Mr. Collin's Class	Mrs. Klein's Class
4	2	1
5	1	3
6	5	2
7	6	2
8	2	3
9	1	5
10	3	3
11	1	2

Which of the following is **best** supported by the data in the table?

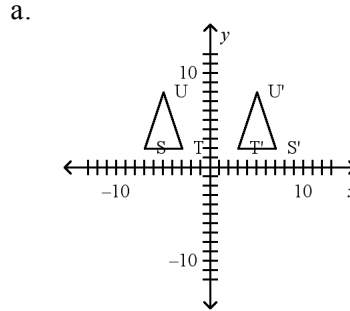
- a. The most common name length is greater for Mr. Collin's class than for Mrs. Klein's class.
- b. At least half of the students in each class have 8 or more letters in their name.
- c. The median name length is greater for Mr. Collin's class than for Mrs. Klein's class.
- d. If each letter from each student's name is written on a file card and then the file cards are evenly distributed among all group members, then the students in Mrs. Klein's class will have more cards than the students in Mr. Collin's class.

69. Describe the translation using coordinate notation. Which shows the proper coordinate notation for the transformation that maps figure ABC to figure $A'B'C'$.

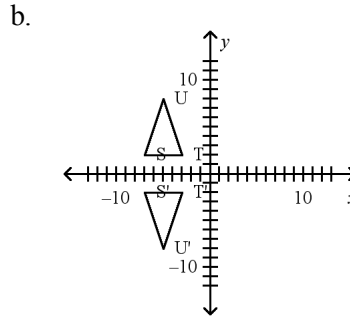


- a. $(x, y) \rightarrow (x + 6, y + 7)$
- b. $(x, y) \rightarrow (x - 6, y - 7)$
- c. $(x, y) \rightarrow (x, y + 7)$
- d. $(x, y) \rightarrow (y - 7, x - 6)$

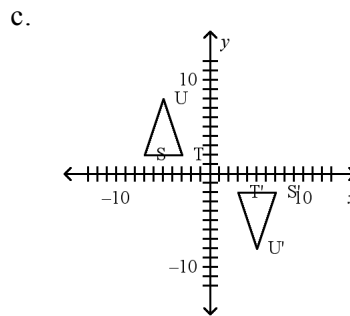
70. Which drawing show as REFLECTION of $\triangle STU$ in the y -axis?
 $S(-7, 2), T(-3, 2), U(-5, 8)$



$S'(7, 2), T'(3, 2), U'(5, 8)$



$S'(-7, -2), T'(-3, -2), U'(-5, -8)$

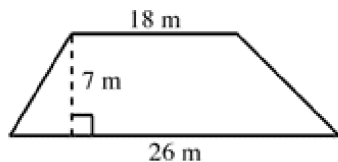


$S'(7, -2), T'(3, -2), U'(5, -8)$

- d. none of these

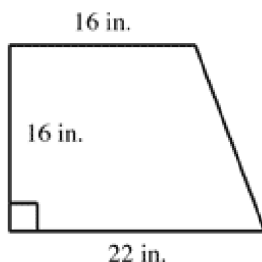
Find the area of the trapezoids.

71.



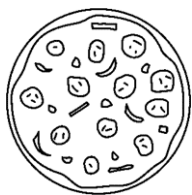
- a. 220 m^2
- b. 440 m^2
- c. 308 m^2
- d. 154 m^2

72.



Find the area of the circle. Use 3.14 for π .
Use estimation to help if needed.

73. $r = 12 \text{ in.}$



- a. 452.16 in.^2
- b. 113.04 in.^2
- c. 1808.64 in.^2
- d. 75.36 in.^2

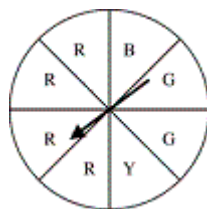
74. Mischa bought a silver colored globe as a decoration for his garden. If the globe has a radius of 20 centimeters, what is the circumference of the globe? Use 3.14 as an approximation for π .
- a. 62.8 cm^2
 - b. 125.6 cm
 - c. 62.8 cm
 - d. 125.6 cm^2

Each letter in DECAFFEINATED is written on a separate piece of paper and put into a bag. You randomly choose a piece of paper from the bag. Find the probability of the event. Write the probability as a fraction.

75. You choose an E.

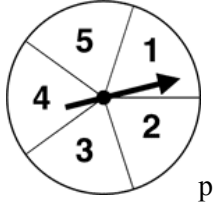
- a. $\frac{1}{13}$
- b. $\frac{3}{13}$
- c. $\frac{1}{8}$
- d. $\frac{3}{8}$

76. The spinner below is divided into equal parts. If you spin the spinner, what is the probability of the pointer landing on B?



- a. 1
- b. $\frac{3}{8}$
- c. $\frac{1}{4}$
- d. $\frac{1}{8}$

77. Jamila spins a spinner with 5 sections of equal area, like the one below, 40 times. It lands on the 2 six times. What is the experimental probability of spinning a 2? Also write what would be the theoretical probability.



- a. $\frac{1}{3}$
 b. $\frac{1}{20}$
 c. $\frac{1}{5}$
 d. $\frac{3}{20}$
78. If the spinner is spun twice, what is the probability that the arrow will stop on a vowel both times?



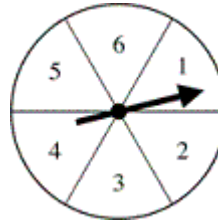
- a. $\frac{5}{36}$
 b. $\frac{1}{18}$
 c. $\frac{1}{9}$
 d. $\frac{7}{36}$

79. From a committee of 5 girls and 4 boys, two are drawn to lead the committee. What is the probability that both people drawn will be girls?

- a. $\frac{23}{18}$
 b. $\frac{7}{6}$
 c. $\frac{5}{18}$
 d. $\frac{1}{6}$

80. Jenna spins a spinner with 6 sections of equal area, like the one below, 50 times. She records her results in a table.

Outcome	1	2	3	4	5	6
Frequency	6	10	8	11	6	9



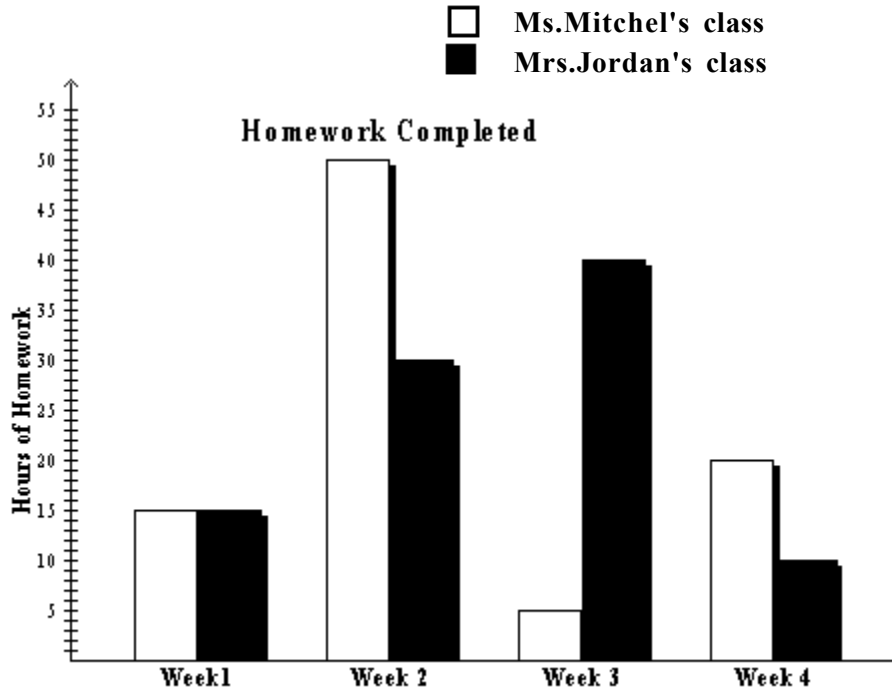
Which statement below is not necessarily true?

- a. Theoretically, each number should have appeared between 8 and 9 times.
 b. Jenna's experimental probability of getting a two is less than the theoretical probability of getting a two.
 c. Jenna's experimental probability of getting an even number is $\frac{3}{5}$.
 d. The theoretical probability of getting an odd number is greater than Jenna's experimental probability.
81. Write the number in standard form. 3.99×10^8
- a. 39,900,000
 b. 3,990,000,000
 c. 0.000000399
 d. 399,000,000

82. What is 772,000 written in scientific notation?

- a. 7.72×10^5
- b. 772×10^3
- c. 0.772×10^6
- d. 7.72×10^4

83. Ms.Mitchel's class and Mrs.Jordan's class wanted to find which class spends the most amount of time on homework. They kept a record of their hours for four weeks.



During which week was the difference in homework time the greatest between the two classes?

- a. Week 1
- b. Week 3
- c. Week 2
- d. Week 4

84. Janelle went to the mall to buy a shirt for a friend. Her choices for the shirt are striped and plaid. Both of the choices come in purple, red, and orange. Which tree diagram represents her choices? Then also find the probability that someone will wear plaid shirt that is purple.

