



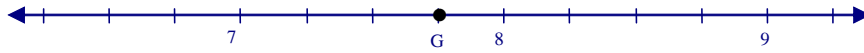
Diagnostic Test #1

Georgia High School Graduation Tests

Name: _____

1. Jim wants to buy a \$16.00 DVD plus 6% sales tax. How much will the sales tax be?
A. \$6.00 B. \$0.61 C. \$1.00 D. \$0.96
2. Change 3^4 to a number without exponents.
A. 12 B. 81 C. 18 D. 64
3. A scalene triangle
A. has three equal sides. C. has one right angle.
B. is always acute. D. has no equal sides
4. Jessica got a job at Taco King's for \$5.85 per hour. She worked 30 hours the first week. Which operation should she use to find out how much she earned?
A. addition B. subtraction C. multiplication D. division
5. If Steven earned \$958.45 this month and must make a monthly payment on his car note \$245.00 this week, which operation should he use to find out how much money he has left after paying his care note?
A. addition B. subtraction C. multiplication D. division
6. The number 30024-4328 is most likely a
A. date B. phone number C. social security number D. zip code
7. Three friends Jim, Kelly, and Josh ordered pizza. The bill for pizza came to \$34.30. If they want to share the bill evenly, what operation should they use to determine how much each person owes?
A. addition B. subtraction C. multiplication D. division
8. Jessica used the ATM twice today. She needs to figure out how much she has left in her bank account. What would be the most appropriate method for her to use?
A. estimation B. calculator C. paper and pencil D. mental computation
9. Kevin is the principal of a school and is investigating size of each class. 12% of students are Freshman, 28% are Sophomores, 25% are Juniors, and 35% are seniors. What kind of graph would best to show the school's students?
A. line graph B. pictograph C. bar graph D. circle graph
10. If 4 people worked one day, they could build 60 computers. If only 3 people worked one day, how many computers could they be expected to make?
A. 20 C. 40
B. 45 D. 80

11. Which number is represented by point G on the number line?



- A. $7\frac{1}{2}$ B. $7\frac{3}{4}$ C. 8 D. $7\frac{1}{4}$

12. The distance from Folkston, GA to Snellville, GA is 306 miles. Nick drove round trip 2 times last month. Estimate the total number of miles he drove.

- A. 1200 miles B. 600 miles C. 1800 miles D. 1500 miles

13. Choose the situation from the list below where approximate numbers would be expected.

- A. Pauline is filling out time sheet that provides her employer with the number of hours she worked.
- B. Matt is a sales person for a copier company and must keep his receipts while he is on the road to make an expense report to his employer.
- C. Jill is preparing for a party and is purchasing napkins, cups, and paper plates.
- D. Paige manages a gas station and she is writing checks to her employees for payroll.

14. There are 14 boys and 16 girls in a 4th grade classroom. The teacher sends a student to the office to pick up copies. What are the chances that the teacher sent a boy to the office?

- A. $\frac{1}{14}$ B. $\frac{7}{8}$ C. $\frac{1}{30}$ D. $\frac{7}{15}$

15. Ngoc rolls two standard 6 sided dice. What are the chances she ends up rolling a “1” on both dice?

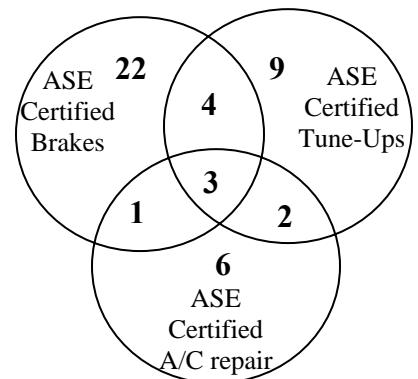
- A. $\frac{1}{18}$ B. $\frac{1}{6}$ C. $\frac{1}{36}$ D. $\frac{1}{12}$



16. Mark wants to buy a digital camera that normally sells for \$210.00. This weekend it is on sale for 40% off. How much could Mark save if he bought it this week?

- A. \$126.00 B. \$52.50 C. \$40.00 D. \$84.00

17. A manager that owns 8 local area Car Maintenance Garages was researching certifications of mechanics that worked for her company.



How many mechanics are certified by ASE to do Tune-Ups?

- A. 9 B. 13 C. 18 D. 22

18. In the following chart, how many roller coaster have a top speed greater than 50 mph?

Roller Coaster	Top Speed
Deja Vu	65 mph
Mind Bender	50 mph
Mine Train	29 mph
Batman	50 mph
Wile E. Coyote	30 mph
Scream Machine	57 mph
Nija	52 mph

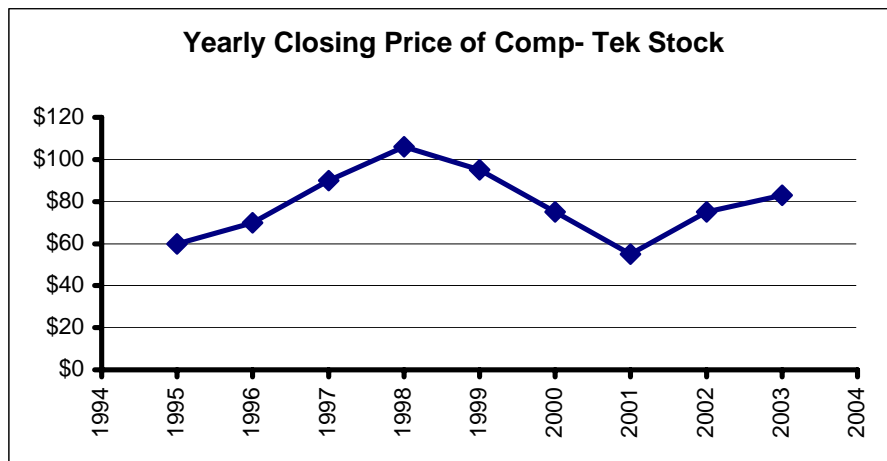
A. 2

B. 3

C. 5

D. 7

19. Nancy bought Comp – Tek stock in 1995. What year was it worth the most?



A. 1995

B. 1998

C. 2001

D. 2003

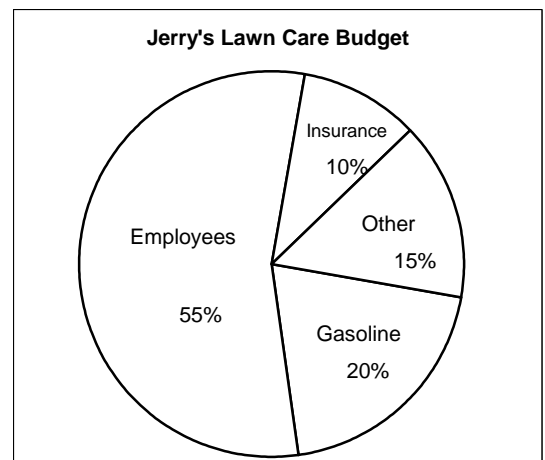
20. What percent of the business budget is not used for Gasoline?

A. 20 %

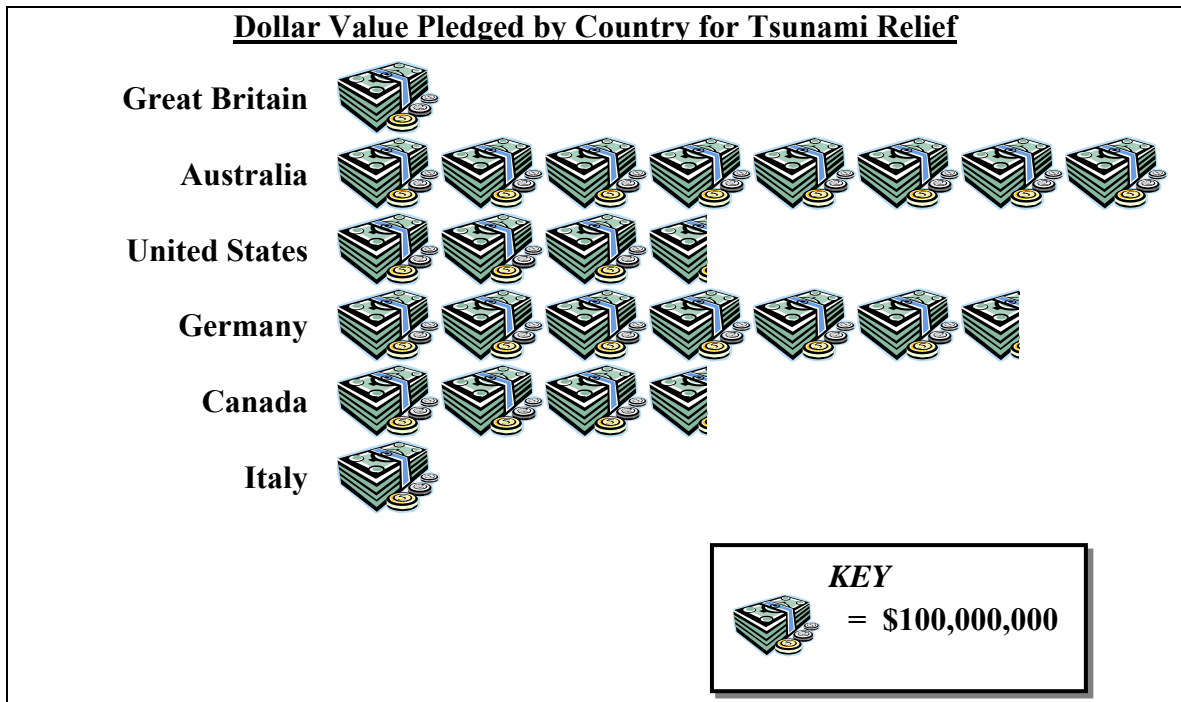
B. 45%

C. 80%

D. 90%



21. In the following pictograph, what is the median contribution value?



- A. \$100,000,000 B. \$391,666,667 C. \$350,000,000 D. \$800,000,000

22. What is the mode life expectancy of animals in captivity? (Refer to the table below)

- A. 11.8 B. 12 C. 15 D. 17

<u>Life Expectancy of Animals</u>			
In the wild	Life Expectancy	In captivity	Life Expectancy
Lion	15	Cat	12
Deer	8	Cow	15
Elephant	38	Dog	12
Fox	7	Lion	17
Mouse	3	Mouse	3

23. What is the range of all the animal life expectancies? (Refer to the table above.)

- A. 3 B. 13 C. 35 D. 38

24. The approximate height of an average classroom would be about:

- A. 3 centimeters C. 3 Decameters
 B. 3 meters D. 3 kilometers

25. What would be the best metric unit to use to measure the length of a building?

- A. centimeters B. millimeters C. meters D. kilometers

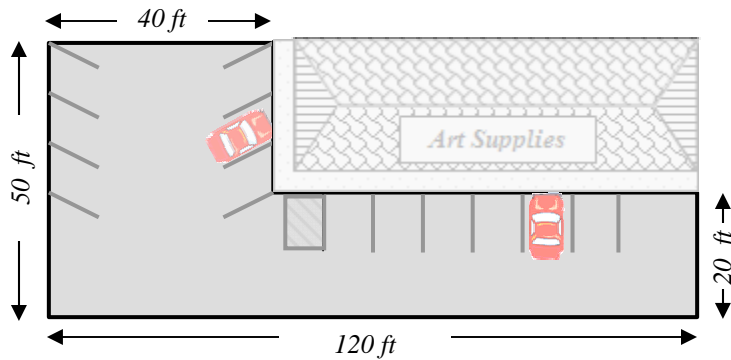
26. Paulina is buying carpet for her bedroom. The carpet costs \$3.00 per square foot installed. The bedroom is 10 feet by 18 feet. Approximately how many ceiling tiles should he buy?

- A. \$60 B. \$540 C. \$84 D. \$1680

27. What is the volume of a cube that has an edge of 9 cm?

- A. 729 cm^3 B. 486 cm^3 C. 81 cm^3 D. 36 cm^3

28. Jan needs to tell a city clerk the area of the parking lot surrounding her art-supply store. Can you find the area of the parking lot?

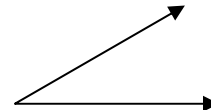


- A. $3,600 \text{ ft}^2$ B. $4,400 \text{ ft}^2$ C. $6,000 \text{ ft}^2$ D. 340 ft^2

29. What would a good estimate be for the temperature in degrees Celsius of a hot, summer day in Georgia?

- A. 37° C B. 84° C C. 70° C D. 100° C

30. This is an example of a(n) _____ angle.



- A. obtuse B. supplementary C. acute D. isosceles

31. If it took a train 14.5 hours to travel 1032 miles, which proportion below could help you determine how long it would take to go 1456 miles?

- A. $\frac{1032}{1456} = \frac{t}{14.5}$ C. $\frac{14.5}{1456} = \frac{t}{1032}$
 B. $\frac{1032}{t} = \frac{14.5}{1456}$ D. $\frac{14.5}{1032} = \frac{t}{1456}$

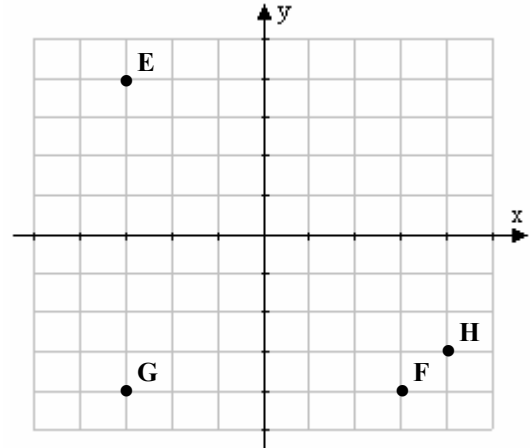
32. Tatjana borrowed \$950 to buy a refrigerator. Using the formula $I = P \times R \times T$, figure out how much interest Tatjana paid if she borrowed \$950 at 11% interest, and made payments for two years.

- A. \$104.50
- B. \$209.00

- C. \$10,450.00
- D. \$20,900.00

33. Which point on the coordinate plane has the coordinates $(-3, 4)$?

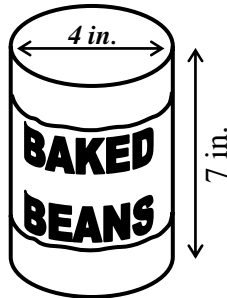
- A. E
- B. F
- C. G
- D. H



34. Mark's bedroom is in the shape of a rectangle. The perimeter is 54 feet. One side is 13 feet long. How long is the other side?

- A. 4.15 ft
- B. 14 ft
- C. 27 ft
- D. 41 ft

35. Using 3.14 for π , figure the volume of the can of bean soup. $V = \pi \cdot r^2 \cdot h$



- A. 87.92 in³
- B. 175.84 in³
- C. 351.68 in³
- D. 113.04 in³

36. Tabitha wants to put a weather stripping around the outside edge of an outdoor circular Jacuzzi hot tub. She needs to figure the _____ to determine how much weather stripping she will need to buy.

- A. volume
- B. circumference
- C. perimeter
- D. area

37. Victor notices that a bathtub holds 34 gallons and takes 8 minutes to fill. How many gallons will be in the bathtub after 5 minutes?

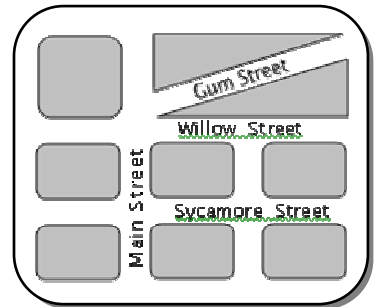
- A. 8.4 gallons
- B. 17 gallons
- C. 21.25 gallons
- D. 24.75 gallons

38. If two triangles have the same angles but have sides that are different lengths

- A. the triangles are congruent to each other.
- B. the triangle's sides are proportional.
- C. the triangles have the same perimeter.
- D. the triangles have the same area .

39. On the map, how could Main Street and Sycamore Street be described?

- A. parallel
- B. perpendicular
- C. skew
- D. collinear



40. Which object is most like a sphere?

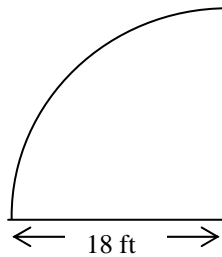
- A. baseball
- B. football
- C. box of crackers
- D. ring

41. Using the formula $V = \frac{lwh}{3}$, find the volume of a pyramid that has a base measuring 5 meters wide, 6 meters long, and 15 meters high.

- A. 80 m³
- B. 45 m³
- C. 450 m³
- D. 150 m³

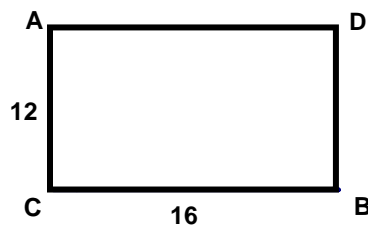
42. Erica is planning a garden in the corner of an atrium. She wants to create the garden using a quarter of a circle. She wants to figure the area so she knows how much mulch to buy.

Using $\pi = \frac{22}{7}$, figure the area of her garden.



- A. 28.28 sq. ft.
- B. 113.14 sq. ft.
- C. 254.57 sq. ft
- D. 1018.28 sq. ft.

43. Given Rectangle ACBD find the length of the diagonal from A to B.



- A. 20
- B. 18
- C. 28
- D. 19

51. Find the numerical value of $8n - n^2$ when $n = 6$.

- A. 2
- B. -22
- C. 12
- D. 36

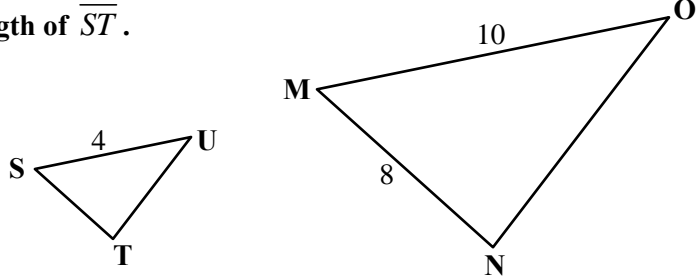
52. John is reading a blue print diagram. A room on the diagram measures 5.5 inches wide by 4.5 inches long. If the scale of his sketch is $\frac{1}{4}$ inch = 1 foot, how long will is the room?

- A. 11.25 feet
- B. 16 feet
- C. 18 feet
- D. 22 feet

53. When someone rounds off numbers to come up with an estimated answer, the estimated answer is

- A. always lower than the actual answer.
- B. never lower than the actual answer.
- C. always the same as the actual answer.
- D. sometimes lower than the actual answer.

54. $\triangle STU$ is similar to $\triangle MNO$. Find the length of \overline{ST} .



- A. 2.6
- B. 3.2
- C. 5
- D. 20

55. Which of the following algebraic expressions corresponds to “ n to the third power multiplied by the difference between $6n$ and 7 ?”

- A. $n^3(6n - 7)$
- B. $7 - 6n \times n^3$
- C. $n^3 \times 6n - 7$
- D. $n^3 \times 6n$

56. Find the value of x , given $7x - 2 = 47$?

- A. 6.43
- B. 7
- C. 8.71
- D. 10

57. Which operation will solve the equation $\frac{x}{3} = 6$?

- A. addition
- B. subtraction
- C. multiplication
- D. division

58. A market research company found that 2 out of 15 parents of new born babies use Snuggies Diapers. If 840 babies were born in a large city one month, how many of those babies could we expect to use Snuggies Diapers?

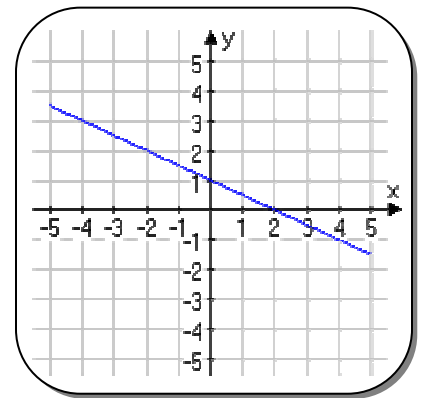
- A. 28
 B. 56
 C. 112
 D. 340

59. The gas to oil mixture for a particular two stroke engine is 3 quarts oil to 18 quarts of gasoline. What is the ratio of gas to oil?

- A. $\frac{21}{3}$
 B. $\frac{1}{7}$
 C. $\frac{6}{1}$
 D. $\frac{1}{6}$

60. The graph shown at the right is the graph of which of the following equations?

- A. $y = -x + 1$
 B. $y = -\frac{1}{2}x + 1$
 C. $y = \frac{1}{2}x + 2$
 D. $y = -\frac{1}{2}x + 2$



61. Given the equation $2x + 3y - 6 = 0$, find the x and y intercepts

- A. (0, 2) (3, 0)
 B. (2, 0) (0, 3)
 C. (0, -2) (-3, 0)
 D. (-2, 0) (0, -3)

62. Which of the following could be the correct next step for solving the following system using elimination?

$$\begin{cases} 3x + 2y = 2 \\ x + 3y = 8 \end{cases}$$

- A.
$$\begin{array}{r} x + 3y = 8 \\ -3y \quad -3y \\ \hline x = -3y + 8 \end{array}$$
- B.
$$\begin{array}{l} y = -\frac{3}{2}x + 1 \\ y = -\frac{1}{3}x + \frac{8}{3} \end{array}$$
- C.
$$\begin{array}{l} 3x + 2y = 2 \\ -3 \cdot (x + 3y = 8) \end{array}$$
- D.
$$\begin{array}{l} 3x + 2y = 2 \\ (+) \quad x + 3y = 8 \\ \hline 4x + 5y = 10 \end{array}$$