1. Which answer is .87 written as a percent?

   A. .87%
   B. 8.7%
   C 87%
   D. 870%

2. What is another way to express 64?

   A. 8^2
   B. 3^4
   C. 6^4
   D. 6.4×10^2

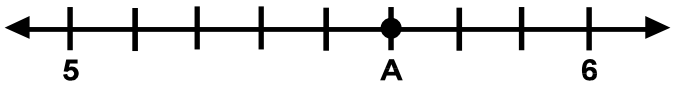
3. Which answer shows the number that point A represents on the graph?

   A. $5\frac{1}{2}$

   B. $5\frac{5}{8}$

   C. $5\frac{3}{4}$

   D. $6\frac{1}{4}$



4. Angelica read to her brother for $\frac{1}{4}$ of an hour. How many minutes did she read?

   A. 4
   B. 15
   C. 25
   D. 40

5. Which of the following pairs of activities could be used to illustrate the commutative property?

A. writing on the chalkboard and erasing the chalkboard
B. putting a dime and a quarter into a vending machine
C. putting on your shoes and socks
D. turning on a lamp at night and reading a book

6. During the first year of operation, the noise level at the county airport was recorded as d decibels. In the second year, the noise level increased by 35 decibels, and in the third year it increased again by 40 decibels. The noise level after 3 years could be expressed as $(d + 35) + 40$.

Use the associative property to write an equivalent expression.

A. $d = 35 + 40$
B. $d + (35 + 40)$
C. $35d + 40$
D. $d(35 + 40)$

7. Carla knows the identity element for addition is zero. What is the identity element for multiplication?

A. 0

B. 1

C. $\frac{1}{x}$

D. $\frac{0}{x}$

8. As you drive along U.S. 41, you see a sign stating that Griffin is 30 miles away. Which would be the **most** appropriate method to estimate how long it will take you to get to Griffin at 55 miles per hour?

A. a calculator
B. a computer
C. mental arithmetic
D. paper and pencil

9. Brendan makes $12 an hour doing yard work during the 10 weeks of summer vacation. If Brendan averages 30 hours per week, what is a reasonable estimate of what Brendan will earn during the summer?

A. $120.00
B. $360.00
C. $660.00
D. $3600.00

10. If shoes which originally cost $24.00 are selling at a 25% discount, what is the amount of the discount?

A. $6.00
B. $8.00
C. $12.00
D. $18.00

11. If Juanita borrows $6,000 to buy a car at a fixed interest rate of 13% per year, how much interest must she pay if she pays the loan in full at the end of one year?

A. $78
B. $565
C. $780
D. $6013

12 Maureen works in a small crafts store where the cash register does not compute the sales tax. If the sales tax is 6%, what amount should Maureen add to a purchase of $18.50?

A. $0.06
B. $0.55
C. $1.11
D. $1.85

13. What is the **best** estimate of a 15% tip on a $14.00 meal?

A. $1.00
B. $1.40
C. $2.00
D. $2.80

14. Masheela's science grades were 95, 90, 75, 80, 90, 90. What is a reasonable estimate of her average grade in science?

A. 95
B. 90
C. 85
D. 80

15. Estimate the sum of 62, 59, 55, 67, and 61.

A. 300
B. 305
C. 400
D. 500

16. Choose the situation from the list below where a result using **approximate** numbers would **most likely** be acceptable.

A. David made a table to show how many gold, silver, and bronze medals were won in the 1996 Atlanta Summer Olympics by the U.S., Canada, Germany, Romania, Britain, and China.
B. The student council is planning a cookout. Scott needs to determine how many hamburgers, hot dogs, and rolls are needed for the event.
C. Jason is the treasurer for his band. He has to keep a record of receipts and expenses and then pay the band members out of the profits.
D. Tom is responsible for counting the items in stock at the supermarket so the manager will know which items he needs to re-order.

17. Choose the situation where **exact** numbers would **most likely** be involved.

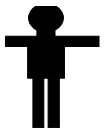
A. Mr. Howard pays an electrician for installing a ceiling fan.
B. John wants to take Sandra out after the baseball game and checks to see if he has enough money.
C. Mr. Dobson is the school librarian and is asked by a reporter for the school paper how many books are in the library.
D. Janice is working part-time at a local supermarket. She makes a budget to help her plan how to spend the money she earns.

18. There are five pencils in a box; some are red and some are blue. The probability of randomly reaching into the box and selecting a red pencil is $\frac{3}{5}$. How many blue pencils are in the box?

A. 1
B. 2
C. 3
D. 5

19. Larami is making a pictograph for the high school newspaper to show the number of students in each grade who are in favor of open lunch. She summarized her data:

Grade	Number of students in favor of open lunch
Seniors	125
Juniors	150
Sophomores	75
Freshmen	50

In the pictograph, how many students could be **best** represented by this symbol? 

A. 1
B. 25
C. 100
D. 150

20. The results of a poll asking, "Who is your favorite late-night talk-show host?" are shown.

Keenan Ivory Wayans..... 20%
David Letterman 23%
Jay Leno..... 32%
undecided..... 25%

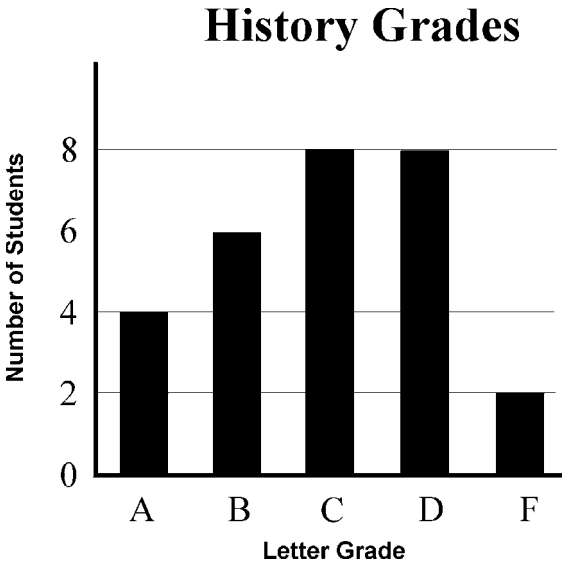
Which type of graph should be used to show the results of the poll?

A. bar graph
B. circle graph
C. line graph
D. pictograph

21. The youngest person in an audience of 600 people is thirteen years old. The range of ages is forty-five years. Which is the age of the oldest member of the audience?

A. 32 years
B. 45 years
C. 46 years
D. 58 years

22. The distribution of grades in Mr. Paul's history class is shown on the graph above. How many more C students than A students are in his class?

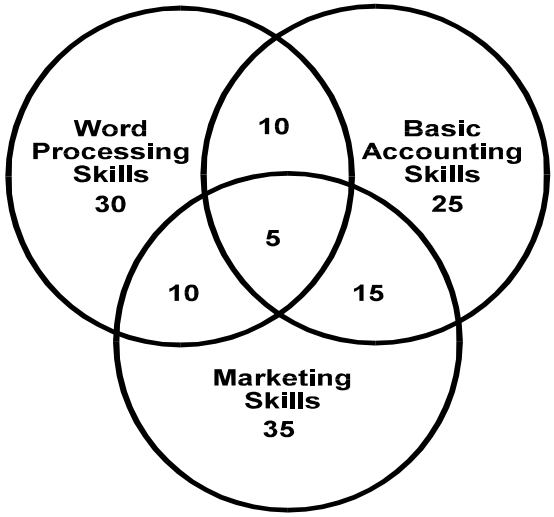


A. 0
B. 2
C. 4
D. 8

23. The distribution of grades in Mr. Paul's history class is illustrated by the graph. What is the ratio of A students to C students in his class?

A. 1:4
B. 2:1
C. 1:2
D. 4:1

24. Mr. Mangione, the Director of Human Resources at Ace Chemical Industries, constructed a diagram to illustrate the skills of applicants for positions in the office of his company.



How many applicants possess word processing, basic accounting, and marketing skills?

A. 5
B. 10
C. 15
D. 20

25.

Ready-to-cook Weight (pounds)	Approximate Time at 325°F (hours)
4 to 8	3 to 4 ½
8 to 12	4 ½ to 4 ¾
12 to 16	4 ¾ to 5 ¾
16 to 20	5 ¾ to 6
20 to 24	6 to 7

Todd is planning to roast an 18-pound stuffed turkey. What is the **least** amount of time he should allow for roasting the turkey at 325°F?

A. 4 ½ hours
B. 5 ¾ hours
C. 6 hours
D. 7 hours

26. The Country Coffee Shop has seven employees. Their salaries are $11,000, $12,000, $12,000, $14,000, $16,000, $17,000, and $17,500. What is the average salary of a coffee shop employee?

A. $6,500
B. $12,000
C. $14,000
D. $14,214

27. Helen spent a total of $100 for five shirts. Later she bought another shirt. She spent an average of $18.78 per shirt for the six shirts. What did Helen pay for the sixth shirt?

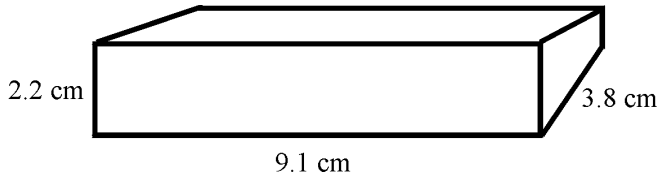
A. $12.68
B. $16.67
C. $20.00
D. $18.78

28. To determine the mass of a piano, which is the **most** appropriate unit of measure?

A. grams
B. centigrams
C. dekagrams
D. kilograms

29. Rounding off to the nearest centimeter, estimate the volume of the box pictured below.

A. 36 cm^3
B. 63 cm^3
C. 72 cm^3
D. 76 cm^3



30. A good estimate for the weight of a member of a high school football team would be

A. 85 kilograms.
B. 185 kilograms.
C. 200 kilograms.
D. 370 kilograms.

31. Given that water boils at 100° C and freezes at 0° C, what would be the **most** comfortable temperature for a room in your home?

A. between 70° C and 80° C
B. between 55° C and 65° C
C. between 40° C and 50° C
D. between 20° C and 30° C

32. Elizabeth starts work at 8:30 a.m. and stops at 3:45 p.m. If she takes 30 minutes for lunch, what is the length of her work day?

A. 6.0 hours
B. 6.75 hours
C. 7.0 hours
D. 7.5 hours

33. What is the volume of a cube that has an edge of 3 centimeters?

A. 3 cm^3
B. 9 cm^3
C. 18 cm^3
D. 27 cm^3

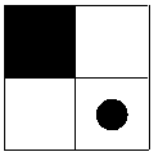
34. If a bag has 45 ounces of bird seed, how many pounds does it contain?

A. between 0.2 and 0.3 pounds
B. between 2.0 and 2.5 pounds
C. between 2.5 and 3.0 pounds
D. between 4.0 and 4.5 pounds

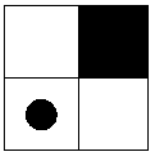
35. If a car travels at 55 miles per hour, about how many miles will it travel in 2.5 hours?

A. 20 miles
B. 60 miles
C. 110 miles
D. 140 miles

36. Study Figures I and II. Determine which transformation, if any, of Figure I is shown in Figure II?



I



II

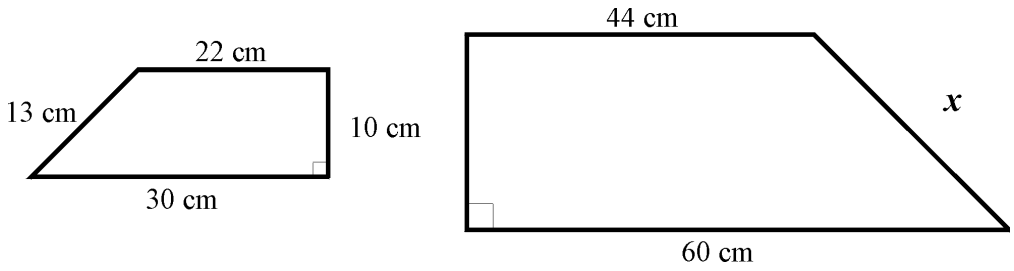
A. dilation
B. reflection
C. translation
D. no transformation

37. Simplify, if possible.

$3\,(2n) + n$

A. $3n$
B. $6n$
C. $7n$
D. $9n$

38. Find the missing length (x) for the pair of similar figures below.

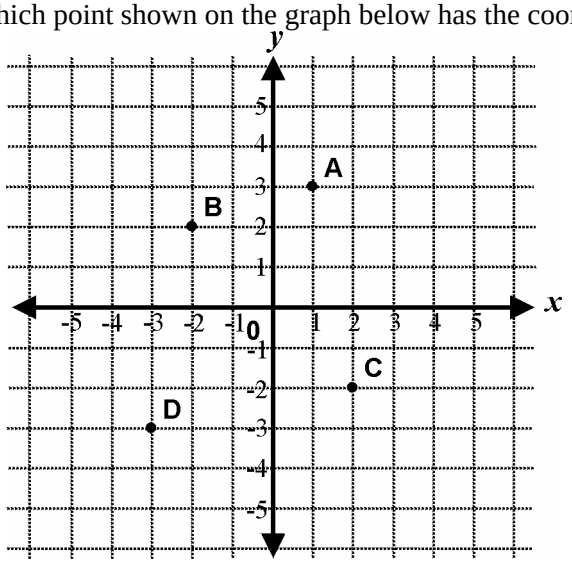


A. 20 cm
B. 26 cm
C. 30 cm
D. 39 cm

39. Henry has a picture that measures 4 inches in width and 6 inches in length. If Henry enlarges the picture to make a poster that measures 2 feet in width, how long will the poster be?

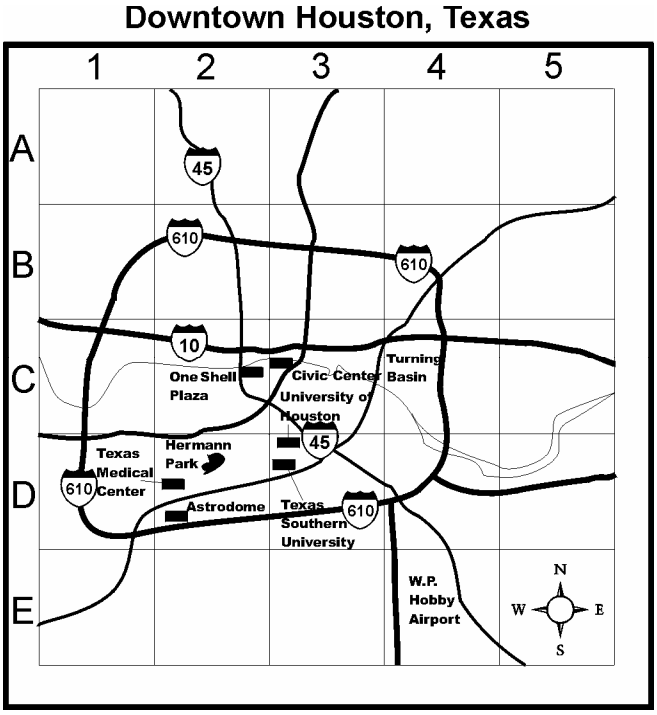
A. 8 inches
B. 12 inches
C. 24 inches
D. 36 inches

40. Which point shown on the graph below has the coordinates (2, -2)?



A. point A
B. point B
C. point C
D. point D

41.

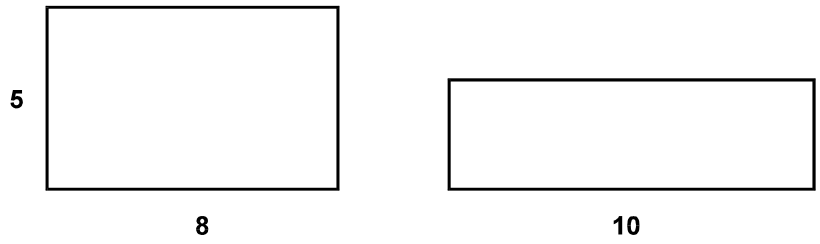


Which of the following indicates the square where Houston's two universities are located?

A. 2, D
B. 3, C
C. 3, D
D. 3, 2

42. The perimeters of the two rectangles are equal. What is the width of the second rectangle?

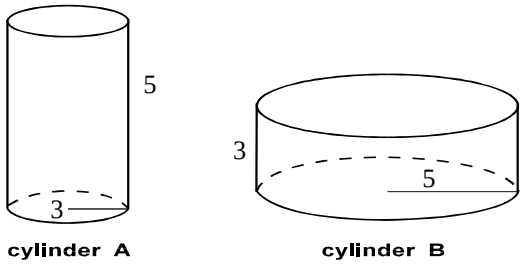
A. 3
B. 5
C. 8
D. 10



43. An irregular pentagon has a perimeter of 27". Four of its sides are 3", 4", 5" and 6". What is the length of the remaining side?

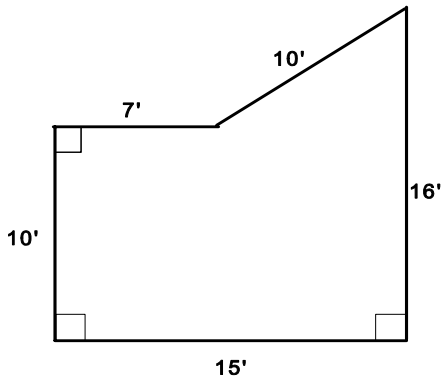
A. 3"
B. 7"
C. 9"
D. 18"

44. The volume of a cylinder is found by using the formula $V = \pi r^2 h$. How do the volumes of cylinder A and cylinder B compare?



A. The volume of cylinder A is larger.
B. The volume of cylinder B is larger.
C. It is not possible to compare the volumes.
D. The volumes of cylinder A and cylinder B are the same.

45. Tim has an irregularly shaped garden, as shown below.



What is the area of his garden (in square feet)?

A. 58 square feet
B. 174 square feet
C. 198 square feet
D. not enough information provided

46. Which item is **most** like a cylinder?

A. basketball
B. box of cookies
C. can of soup
D. desk

47. The strings on a guitar are examples of what kind of line segments?

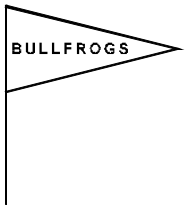
A. collinear
B. intersecting
C. parallel
D. perpendicular

48. Sarah's flower garden is in the shape of a hexagon. What is the sum of the degree measures of the interior angles of her garden?

A. 120°
B. 180°
C. 360°
D. 720°

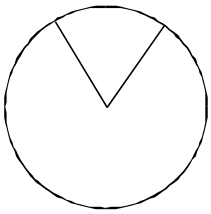
49. The Pep Club is making pennants, as shown below. The angles at the top and the bottom of the pennant are equal in measure. Classify the triangle according to the lengths of its sides.

A. acute triangle
B. equilateral triangle
C. isosceles triangle
D. scalene triangle



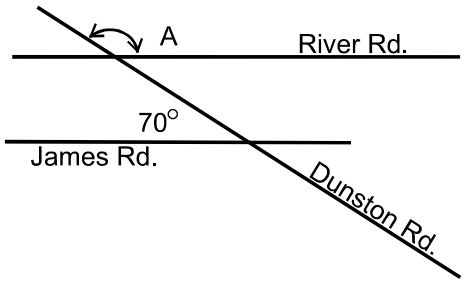
50. Tyrone wants to make a design with a circle divided into pie-shaped pieces of equal size. What is the **smallest** number of pieces Tyrone can have if he wants the central angles to be acute?

A. 3
B. 4
C. 5
D. 6



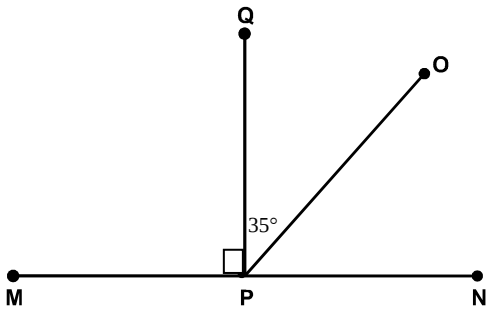
51. James Road and River Road are parallel. What is the measure of ∠A?

A. 70°
B. 90°
C. 100°
D. 110°

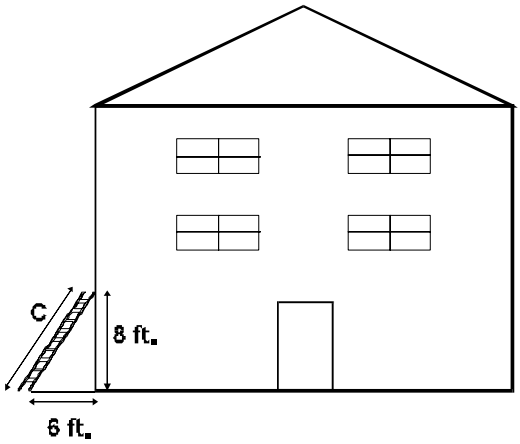


52. What is the measure of ∠OPN?

A. 55°
B. 65°
C. 90°
D. 180°



53. A ladder is placed against the side of a house, as shown. Which method should determine the length of the ladder (C)?



A. $C = 2 \times 8 + 2 \times 6$

B. $C = \sqrt{8^2 + 6^2}$

C. $C = 8 + 6$

D. $C = \frac{(8 \times 6)}{2}$

54. John bought 6 apples for 10 cents each and 4 pears for 13 cents each at one store. At a second store, he bought 5 apples for 10 cents each, 6 pears for 13 cents each, and a grapefruit for 30 cents. Which expression would enable John to find out how much money he spent in the two stores?

A. 22(10 + 13) + 30
B. 6(10) + 6(13) + 30
C. 10(26) + 11(26) + 30
D. 10(5 + 6)+13(4 + 6) +30

55. The number of red marbles that Jon has is shown by the expression $2x + 5$, with x representing his yellow marbles. If Jon has 9 yellow marbles, how many red marbles does he have?

A. 7
B. 17
C. 23
D. 47

56. Find the numerical value of $2b^2 + b$ when $b = 6$.

A. 30
B. 78
C. 150
D. 228

57. Mary drives from Atlanta to Myrtle Beach in six hours. If she knows her average speed is 55 mph and wants to find the distance in miles from Atlanta to Myrtle Beach, what equation should she use? (Use the formula $d = rt$.)

A. $d = 55 \times 6$

B. $55 = 6d$

C. $d = \frac{55}{6}$

D. $6 = 55d$

58. Twelve printing presses, all alike, can do a job in 3 hours. How many hours would it take 10 of these printing presses to do the same job?

A. 2.5 hours
B. 3.0 hours
C. 3.6 hours
D. 4.0 hours

59. Ramon's new car uses 5 gallons of gasoline to drive 147 miles. Which proportion should Ramon use to determine the number of gallons of gasoline (G) he will need to drive 300 miles?

A. $\frac{300}{G} = \frac{5}{147}$ B. $\frac{G}{147} = \frac{5}{300}$ C. $\frac{5}{G} = \frac{300}{147}$ D. $\frac{5}{147} = \frac{G}{300}$

60. Which of the following algebraic expressions corresponds to "five reduced by the product of a number and six"?

A. $\frac{5}{6n}$

B. $6n - 5$

C. $5 + 6n$

D. $5 - 6n$

61. Which operation would be used to solve the equation, $6x = 42$?

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

62. What is the value of x, if $2x + 3 = 15$?

A. 5
B. 6
C. 9
D. 12

63. Solve for x, if $\frac{2}{x} = \frac{15}{60}$

A. 4
B. 8
C. 20
D. 30

64. Sam is on the football team. He played in 7 games and did not play in 4. What is the ratio of the number of games he played to the total number of games?

A. $\frac{7}{4}$

B. $\frac{4}{11}$

C. $\frac{4}{7}$

D. $\frac{7}{11}$

65. If one out of 5 people drink Diet Delite, how many people can be expected to drink Diet Delite in a city of 45,000 people?

A. 900
B. 9,000
C. 44,995
D. 225,000