Where appropriate, please show all work. Circle the correct answer.

1. A rare specimen weighed 1.08 grams. If the weight increased by 0.01 grams, what would the specimen now weigh?

   a. 1.09 g **b.** 1.90 g **c.** 9.10 g **d.** 19.0 g

2. Which means the same as 4 + 0.3 + 0.01?

   a. 430.1 **b.** 43.01 **c.** 4.31 **d.** 4.031

3. Which means the same as 6 + .6 + .06?

   a. .18 **b.** 666 **c.** 600.66 **d.** 6.66

4. Which means the same as 1.25×10^3?

   a. 1250 **b.** 125000 **c.** 12.50 **d.** 1.250

5. Which means the same as 2.571×10^2?

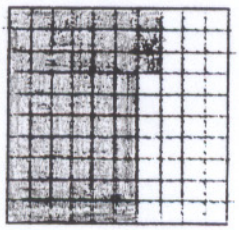
   a. 257,100 **b.** 25.71 **c.** 2.57100 **d.** 257.1

6. Which means the same as 1.23×10^{-3}?

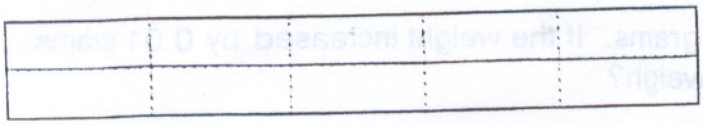
   a. .000123 **b.** .123000 **c.** .00123 **d.** 1230

7. Which percent names the amount of the grid that is shaded?

   a. 6.3 percent
   b. 7.3 percent
   c. 63 percent
   d. 73 percent



8. Shade 2/5 of the shape.



9. 4/5 of Chip's family likes corn on the cob. Which decimal number names the same amount?

a. 4.5 **b.** 0.45 **c.** 0.80 **d.** 0.08

10. 3/8 of Monica's family likes creamed corn. Which decimal number names the same amount?

a. 2.66 **b.** $2.\overline{6}$ **c.** 0.38 **d.** 0.375

11. 60 percent of Joe's family likes corn fritters. Which decimal number names the same amount?

a. 0.6 **b.** 0.66 **c.** 0.06 **d.** 6.0

12. Solve: 52.70 x 100

13. Solve: 749 x 0.7

14. $\frac{1}{6} + \frac{3}{8}$

a. 4/14
b. 4/24
c. 13/24
d. 5/8

15. Multiply: 15 • 3/4

a. 20 **b.** 11 1/4 **c.** 3/60 **d.** 11 4/5

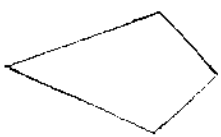
16. If the ratio of boys to girls is 2 to 3, which of these is not a typical class of boys and girls?

a. 10 boys, 15 girls
b. 20 boys, 30 girls
c. 4 boys, 6 girls
d. 7 boys, 21 girls

17. Amanda babysat for 5 hours and was paid $ 27.50. At this rate, how long would it take Amanda to earn $143?

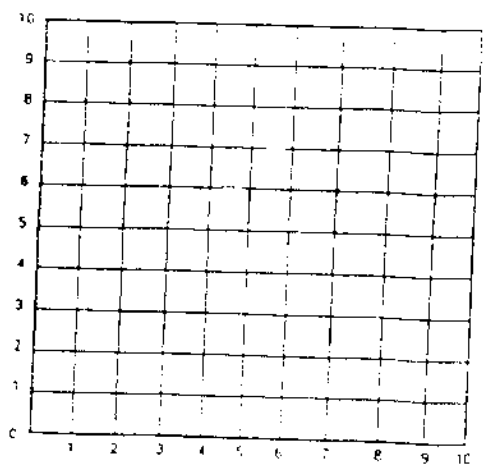
a. 30 hours **b.** 26 hours **c.** 100 hours **d.** 17 hours

18. Draw a figure congruent to the one below. Explain why the figure you drew is congruent.



19. Find 75 % of 32.

20. Plot the point (4,3) and label it M.



21. Chuck saved 60% of his $120 paycheck. How much money did he save?

22. The table shows the number of cookies sold in the cafeteria each week in one month.

Week	Number
1	428
2	512
3	326
4	402

What was the AVERAGE number of cookies sold per week this month?

23.

Day	Number of Tickets Sold
Friday	1264
Saturday	1821
Sunday	2104
Monday	1994

Which list shows the days in order from the LEAST number of tickets sold to the GREATEST number of tickets sold?

a. Monday, Saturday, Sunday, Friday
b. Friday, Saturday, Sunday, Monday
c. Friday, Saturday, Monday, Sunday
d. Sunday, Saturday, Monday, Friday

24. John used his computer 4 1/4 hours on Monday, 4 1/2 hours on Wednesday and 3 7/8 hours on Friday. Which list shows these days in order from the GREATEST to LEAST amount of computer time?

a. Monday, Wednesday, Friday
b. Wednesday, Monday, Friday
c. Friday, Wednesday, Monday
d. Wednesday, Friday, Monday

25. Sue scored between 7.2 and 7.4 points. Which could be the number of points she scored?

a. 7.19 **b.** 7.41 **c.** 7.03 **d.** 7.24

26. Jim rode his bike between 1 1/2 and 1 3/4 hours. Which could be the number of hours he rode?

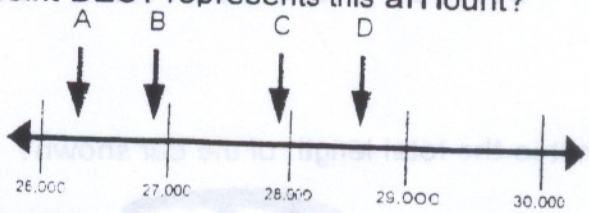
a. 1 3/8 **b.** 1 5/8 **c.** 1 7/8 **d.** 1 13/16

27. Rosie's restaurant served 32,817 customers last year. This number rounded to the NEAREST thousand is

a. 32,000 **b.** 33,000 **c.** 35,000 **d.** 30,000

28. One of the leading passers in professional football passed for 26,862 yards during his career. Which point BEST represents this amount?

a. A
b. B
c. C
d. D



29. Joe's dog weighed 101.5 pounds at the beginning of summer but lost 9.2 pounds by the end of summer. Which number sentence could be used to determine the dog's weight at the end of the summer?

a. 101.5 - 9.2 = ☐
b. 101.5 + 9.2 = ☐
c. 101.5 ÷ 9.2 = ☐
d. 101.5 x 9.2 = ☐

30. Write a story problem that can be solved using the equation: **18.64 ÷ 0.5 = X**

31. Solve this problem: 1.243 + 847 = ☐

32. Solve this problem: 48.50 x 10 = ☐

33. Solve this problem.

643
x 0.6

34. 1/4 + 3/8

a. 5/4 **b.** 5/8 **c.** 4/8 **d.** 4/12

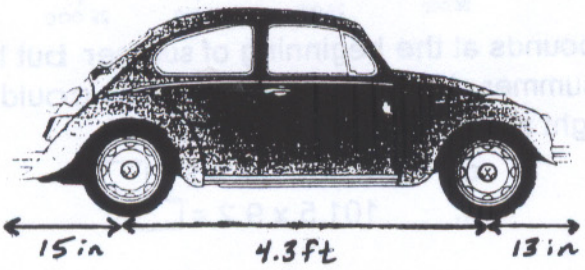
35. 14 x 2/3

a. 21 **b.** 9 1/3 **c.** 5 1/3 **d.** 1/21

36. The employees of the local insurance company collected $5768.67 for a new children's playground. The employees of a local car dealership collected $3910.56. How much money did they collect all together?

a. $8679.23 **b.** $9679.23 **c.** $9679.13 **d.** $9678.13

37. What is the total length of the car shown?



38. Allison drove 83.4, 98.1, 83.2 and 94 miles on four different days. What is the AVERAGE number of miles Allison drove on the four days?

39. Leslie bought 3 notebooks that each cost $2.89 and 6 pens that cost $.79. She handed the clerk a $20. If there is no tax, how much change should Leslie receive? Show or explain how you got your answer.

40. Evan needs to multiply 989 by 79,899. Which of the following would be BEST for Evan to use to ESTIMATE the product?

a. 900 x 80,000
b. 900 x 70,000
c. 1000 x 80,000
d. 1000 x 70,000

41. To ESTIMATE the product of 5218 and 6134, Rachel multiplied 5000 x 6000. Would Rachel's estimate be MORE or LESS than the actual product?

a. More, because she rounded both of the numbers up.
b. More, because she rounded both of the numbers down.
c. Less, because she rounded both of the numbers up.
d. Less, because she rounded both of the numbers down.

42. Kim wants to ESTIMATE the cost per ounce of an 8.7 ounce jar of sauce that costs $1.75.

What would be a GOOD ESTIMATE?

Explain how you made your estimate.

43. Nancy rode on the bus 38.45 miles the first week of school and 29.85 miles the second week. ABOUT how many miles did she ride on the bus during the two weeks?

a. A little less than 60.
b. A little more than 60.
c. A little less than 70.
d. A little more than 70.

44. The groundskeeper at the ballpark needed dirt to cover 380.75 square feet of one field and 590.50 square feet of another. He bought 800 square feet of turf. Explain how you could use ESTIMATION to decide if he bought enough dirt to cover both fields.

45. If the ratio of oil to gas in a lawn mower is 1 to 16, which of these should NOT be used in the mower?

a. 4 parts oil, 64 parts gas
b. 2 parts oil, 32 parts gas
c. 1 part oil, 8 parts gas
d. 5 parts oil, 80 parts gas

46. Joe worked 6 hours and was paid a total of $27. At this rate, how long would it take Joe to earn $90?

a. 40.5 hours **b.** 20 hours **c.** 15 hours **d.** 3 1/2 hours

47. 75% of 16 = ☐

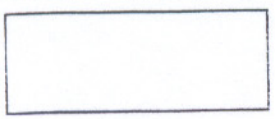
48. Kelly received $90 for her birthday. She saved 40 percent of her money. She spent the rest of it at the mall. How much money did she spend at the mall?

49.

If the length of the turtle is 30 centimeters, the length of the lion is ABOUT
a. 60 cm **b.** 90 cm **c.** 150 cm **d.** 200 cm

50. A tree is 1249 centimeters tall. How many meters is that?
a. 0.1249 **b.** 12.49 **c.** 1.249 **d.** 12,490

51. What is the area of this rectangle?



52. Which is the BEST unit to measure the amount of water needed to fill a bathtub?

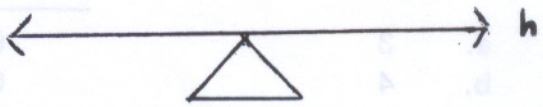
a. gallons **b.** quarts **c.** pints **d.** cups

53. What is a name for this shape?

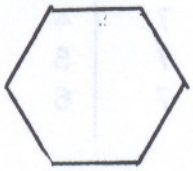
a. decagon **b.** pentagon **c.** octagon **d.** quadrilateral

54. Draw a heptagon, then describe what a heptagon is.

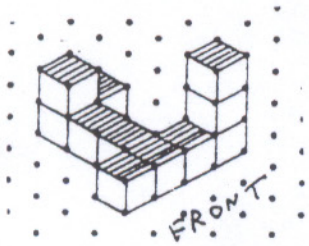
55. Draw a reflection of the figure across line h.



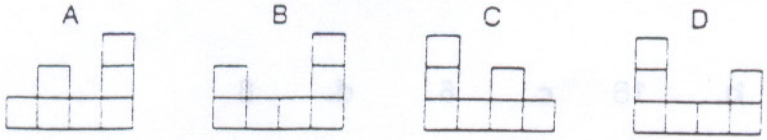
56. Draw 1 line of symmetry on the figure. Then write a sentence or two to tell why the line you drew is a line of symmetry.



57.

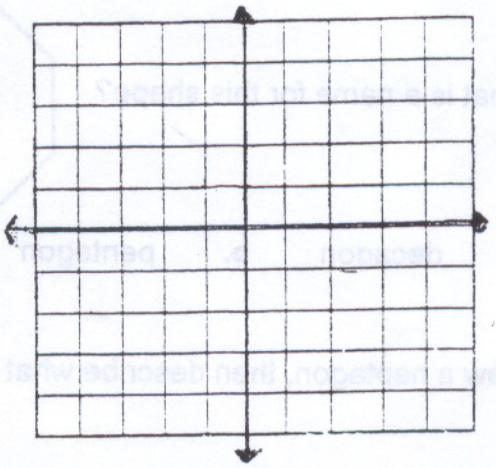


Which figure BEST represents what the front of this building would look like?



58. Draw a figure congruent to the one below. Explain why the figure you drew is congruent.

59. Write the letter A at the point (-3,2)



60. Based on the data in the stem and leaf plot, how many students were under 6 feet tall?

Height in Inches

6	8
6	9
7	0
7	1 1
7	2 2 2 2
7	3 3 3
7	4
7	5
7	6

a. 3
b. 4
c. 5
d. 6

61. Solve this problem.

What is the value of X in this equation?

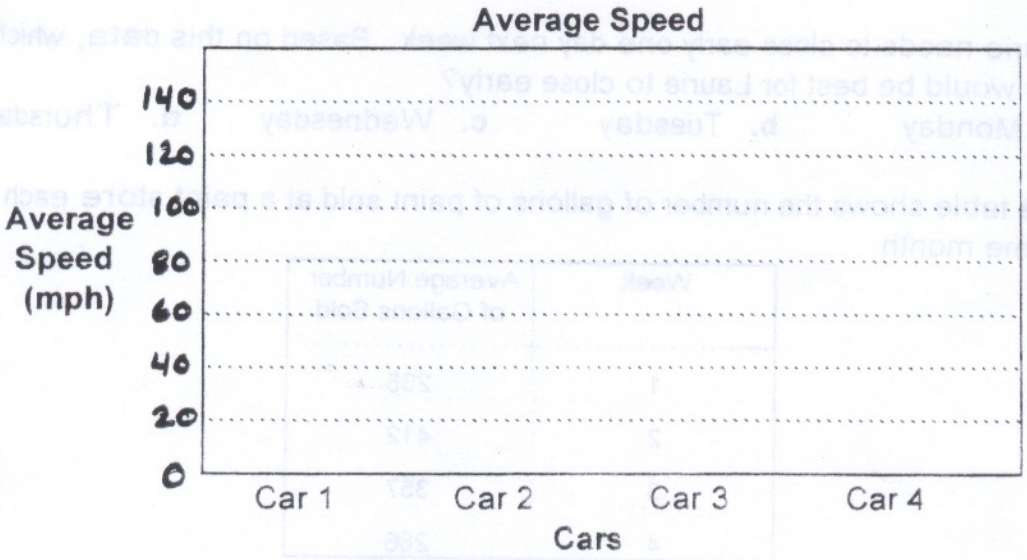
X - 9.6 = 57.52

62. 16 + (2-1) =

a. **17** **b.** 16 **c.** 6 **d.** 8

63. The table shows the AVERAGE speeds for the FIRST 4 finishers in a car race. Complete the BAR GRAPH to show the same information.*

Car	Average Speed (mph)
1	118
2	126
3	132
4	122



* Reminder: Bars should not touch.

64. This table shows the AVERAGE number of people that shop at Laurie's store for each day of the week.

Day	Average Number of People
Monday	102
Tuesday	80
Wednesday	95
Thursday	132
Friday	157

Laurie needs to close early one day next week. Based on this data, which day would be best for Laurie to close early?

a. Monday **b.** Tuesday **c.** Wednesday **d.** Thursday

65. The table shows the number of gallons of paint sold at a paint store each week in one month.

Week	Average Number of Gallons Sold
1	235
2	412
3	357
4	286

What was the AVERAGE number of gallons of paint sold each week at this store?

66. In this formula, C represents the total charge in dollars for babysitting, and H represents the number of hours the child is kept. How much should Valerie pay if his child is at the babysitting service for 3 hours? **C = 5.25 + 2.50H**

a. $7.75 **b.** $12.75 **c.** 14.25 **d.** 23.25

67. If Tom spins this spinner once, what is the probability that the arrow will land on 4?

Explain how you arrived at your solution.

68. The table shows the results of a probability experiment involving picking colored cubes out of a box.

Color	Number of Times Picked
Purple	5
White	7
Yellow	4
Green	2
Blue	6
Red	5

Which would be a REASONABLE statement about all the cubes in the box?

a. There are more purple cubes than any other color.
b. There are no white cubes.
c. There are the same number of yellow and green cubes.
d. There is a greater chance of picking a blue cube than a red cube.

69. These clocks follow a pattern.

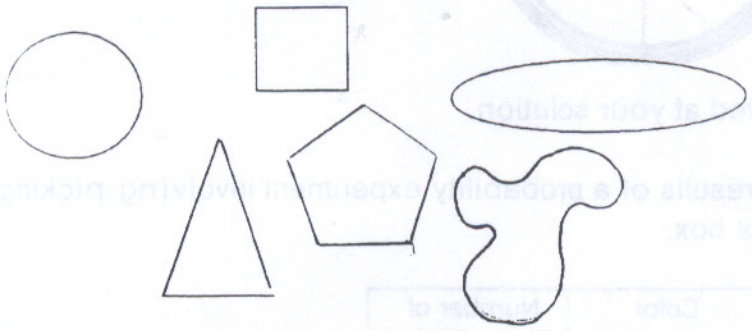
. . .

Draw a clock that should be the 12th in the pattern. Write a sentence that explains how you decided what to draw.

70. Mike just bought M baseball trading cards. He sold 6 to his friend. Which expression represents how many new trading cards he has left?

a. 6 - M b. 6M c. M + 6 d. M - 6

71. Draw these shapes in 2 groups so the figures in each group have something in common. Then write a sentence that explains how you grouped the shapes.



72. The table shows the number of each color of M&Ms in one bag.

Color	Number
red	5
blue	7
green	2
yellow	4
brown	5
orange	6

Which would be a reasonable statement about the M&Ms?

a. There is a greater chance of selecting a green M&M than a yellow M&M.
b. There is the same chance of selecting a red or brown M&M.
c. There is no chance of selecting blue M&Ms.
d. There is a 100% chance of getting an orange M&M.

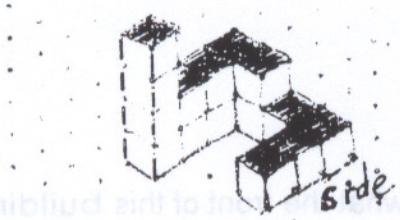
73. Ross and his three friends have $65 to spend at a restaurant. The members of the group are Ross, Betty, Melanie, and Tyrell.

The menu at the restaurant is as follows:

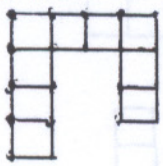
ENTREES	
Chicken Dinner	$ 9.95
Hamburger	$ 5.95
Cheeseburger	$ 6.95
Fish Dinner	$ 8.95
DRINKS	
Large Soda	$ 1.50
Tea	$ .95
Coffee	$ 1.25
Milk	$ 1.00
DESSERTS	
Cake	$ 2.50
Pie	$ 1.95
Ice Cream	$ 2.25

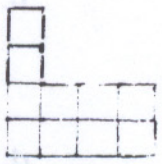
Each member of the group ordered at least one entree, at least one drink and only one dessert. Show what each member of the group could have ordered and how much each spent if the group spent about $60.00 in all.

74.

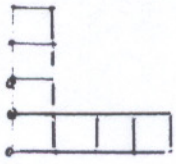


Which figure BEST represents what the side view of this building looks like?

a. 

b 

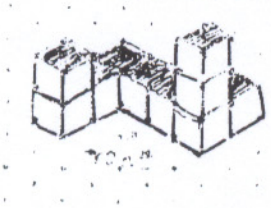
c. 

d. 

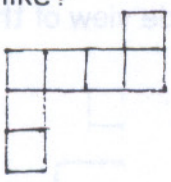
75. Michelle and her friends have $30 to spend at the T.E. Diner. Her friends are Christine Joe, Julie and Ed. The diner's menu is as follows:

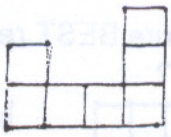
ENTREES	
Hamburger	$ 2.00
Cheeseburger	$ 2.50
Turkey Club	$ 2.95
Grilled Cheese	$ 1.95
DRINKS	
Soda	$ 1.25
Hot Chocolate	$ 1.50
Lemonade	$ 2.00
Milkshake	$ 2.75
DESSERTS	
Cheesecake	$ 1.45
Frozen Yogurt	$ 2.15
Ice Cream	$ 2.00

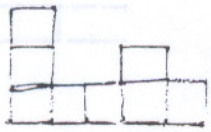
Each member of the group orders one entree, one drink and one dessert. Show what each person may order and how much each will spend. Remember, the total must be $30 or less.

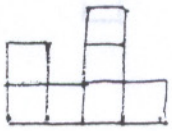
76. 

Which figure BEST represents what the front of this building would look like?

a. 

b. 

c. 

d. 

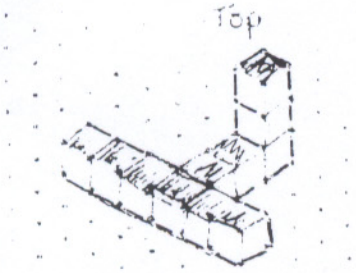
77. Sharon has these three kinds of stars:

She plans to use 16 stars to make a design on her ceiling that is 4 rows by 4 columns. She wants the design to be symmetrical and she only has $50 to spend.

Use the grid below to draw a design that Sharon could use. Be sure to use all 3 kinds of stars.

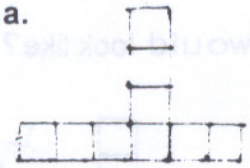
Then show how much Sharon spent and explain why the design is symmetrical.

78.

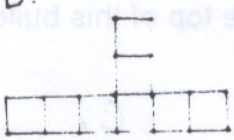


Which figure BEST represents what the top of this building would look like?

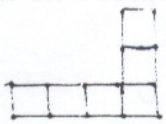
a.



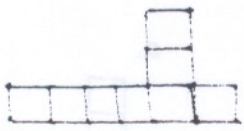
b.



c.



d.



79. Tom wanted to earn enough money to buy a new television. He created the following table to show the hours he was available to work each day:

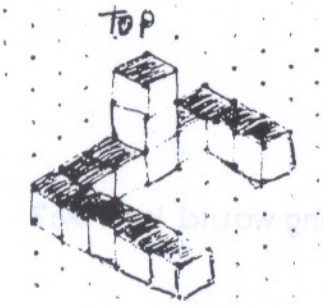
Day	Hours Available to Work
Saturday	5 hours
Sunday	2 hours
Monday	1 1/2 hours
Tuesday	1 hour
Wednesday	1 1/2 hours
Thursday	2 1/2 hours
Friday	1 1/2 hours

Tom earns $ 5.75 per hour and can only work 12 hours each week.

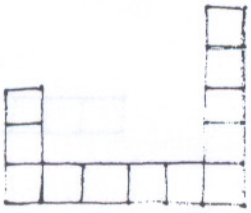
In the space below, create a schedule that shows the 12 hours Tom could work each week.

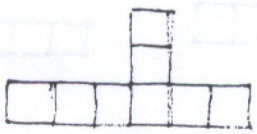
Then determine how many weeks Tom needs to work in order to make $350.

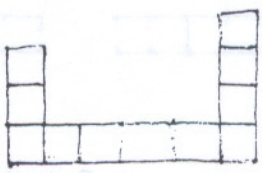
Show your work.

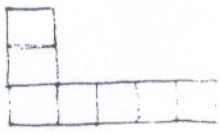
80. 

Which figure BEST represents what the top of this building would look like?

a. 

b. 

c. 

d. 

81. Andrew wants to earn enough money to buy new sneakers. He creates the following table to show the hours he has available to work each day:

Day	Hours Available to Work
Sunday	2 1/2
Monday	2
Tuesday	1
Wednesday	2
Thursday	1 1/2
Friday	3
Saturday	2 1/2

Andrew earns $ 4.25 per hour and can only work 10 hours each week.

1. How long will it take Andrew to earn $185.00?

2. Create a schedule that shows 10 hours that Andrew could work.