

Penny Sikes 5th and 6th Grade Mathematics Tournament
Sponsored by Farmers and Merchants Bank

5th Grade Individual Test

- 1) Make sure your name, the full name of your school, and your grade are written on the scantron.
- 2) NO CALCULATORS!
- 3) DO NOT OPEN THIS TEST BOOKLET UNTIL INSTRUCTED TO DO SO BY THE TEST MONITOR.
- 4) If you must leave to go to the restroom, raise your hand and a monitor will escort you to the nearest restroom. Remember you have a time limit.
- 5) Read each problem carefully and mark each answer on your scantron.
- 6) Each correct answer on the test will be counted as one point on your individual score.
- 7) If individuals have the same written test score, ties will be broken by determining which student gave correct answers to the most difficult item(s) on the test.
- 8) When the individual testing is over, please make sure you take your pencil, test, and scrap work with you. You will need the pencil for the ciphering rounds.

5th Grade Mathematics Test

1) How many of the following numbers are prime?

7	8	9	10	11	12	13	14	15	16	17
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- a) 2 b) 3 c) 4 d) 11

2) Which of the following shows the number 60 factored into prime numbers?

- a) 2×30 b) 3×20 c) $2 \times 3 \times 10$ d) $2 \times 2 \times 3 \times 5$

3) $11.3 \times 2.7 =$ _____

- a) 26.91 b) 29.31 c) 30.31 d) 30.51

4) Javier bought 9 pounds of ground beef. He saved \$8.37 by using a store coupon. How much did he save per pound of ground beef?

- a) \$0.89 b) \$0.93 c) \$1.08 d) \$75.33

5) $23.31 \div 37 =$

- a) 0.513 b) 0.63 c) 5.13 d) 6.3

6) Maurice talked on the telephone to two friends. He talked to Sherry for $\frac{1}{4}$ hour, and to Gabriel for $\frac{1}{3}$ hour. How much time did Maurice spend on the telephone?

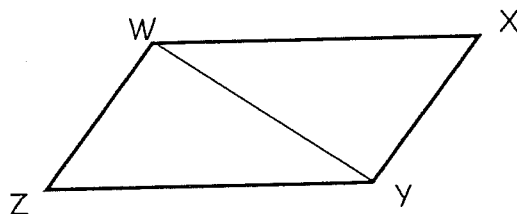
- a) $\frac{1}{6}$ hour b) $\frac{2}{7}$ hour c) $\frac{5}{12}$ hours d) $\frac{7}{12}$ hours

7) Hector can throw a ball $50\frac{3}{5}$ feet. Lee can throw the same ball $48\frac{1}{3}$ feet. How much farther can Hector throw the ball than Lee?

- a) $2\frac{2}{15}$ feet b) $2\frac{4}{15}$ feet c) $2\frac{3}{5}$ feet d) $2\frac{4}{5}$ feet

8) In the figure below, WXYZ is a parallelogram. If the area of triangle WXY is 22 square inches, what is the area of WXYZ?

- a) 11 square inches
 b) 22 square inches
 c) 33 square inches
 d) 44 square inches

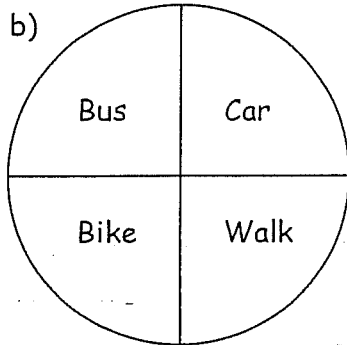


- 9) Students were asked how they traveled to school each day. The table below shows these results.

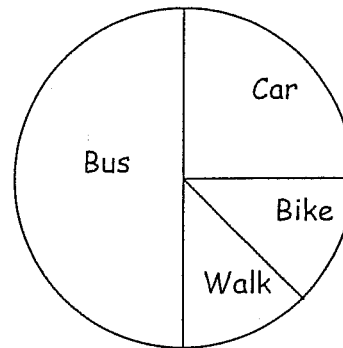
Travel to School

Type of Travel	Percentage
Bus	50%
Car	30%
Walk	15%
Bike	5%

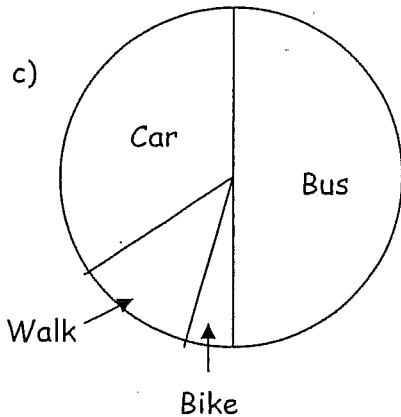
Which graphic correctly displays these data?



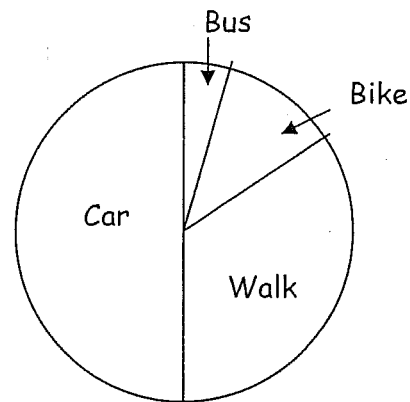
a)



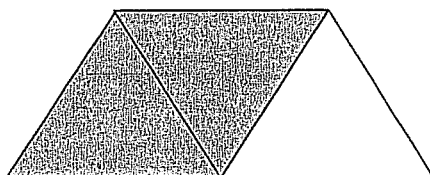
c)



d)

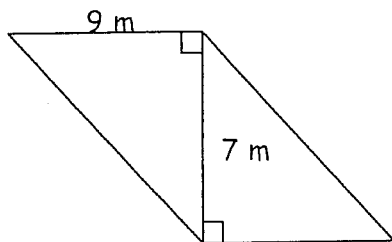


- 10) The trapezoid below can be divided into 3 identical triangles. If the area of the shaded parallelogram is 16 cm^2 , what is the area of the trapezoid?



- a) 8 cm^2
- b) 24 cm^2
- c) 32 cm^2
- d) 48 cm^2

11) What is the area, in square meters, of the parallelogram below?

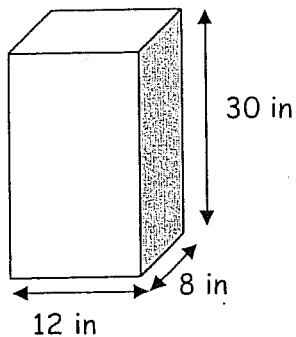


- a) 31.5
- b) 54
- c) 63
- d) 70.6

12) Find the area of a circle with a radius of 5 cm. (Use $\pi \approx 3.14$.)

- a) 31.4 cm^2
- b) 15.7 cm^2
- c) 7.85 cm^2
- d) 78.5 cm^2

13) What is the volume, in cubic inches, of the school locker below?



- a) 2880
- b) 2580
- c) 390
- d) 360

14) What is the volume of a cube that measures 10 inches on each edge?

- a) 10 cubic inches
- b) 100 cubic inches
- c) 1000 cubic inches
- d) 10,000 cubic inches

15) If $\triangle ABC \cong \triangle XYZ$, which of the following is not correct?

- a) $\angle A \cong \angle X$
- b) $\overline{AC} \cong \overline{XY}$
- c) $\angle B \cong \angle Y$
- d) $\overline{BC} \cong \overline{YZ}$

16) The circumference of a circle is 47.1 meters. What is the diameter of the circle? (Use $\pi \approx 3.14$.)

- a) 4.71 meters
- b) 30 meters
- c) 7.5 meters
- d) 15 meters

17) According to a report published in 1999, the population of Dallas was 1,063,292. What does the 6 in this number represent?

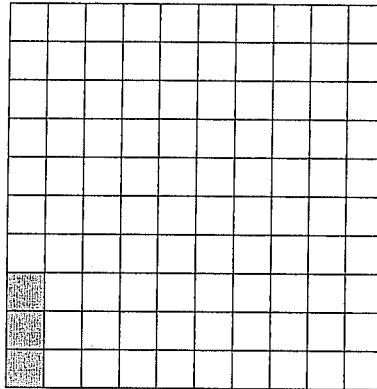
- a) six thousand
- b) sixty thousand
- c) sixty-three thousand
- d) six hundred thousand

- 18) The United States Mint lists the standard weight of a United States dime as 2.268 grams. What is the value of the 8 in that number?
- a) eight thousandths b) eight hundredths
c) eight tenths d) eight

- 19) Marcy bought 6 apples priced at \$0.35 each. She used a coupon worth \$0.50 off the total cost. Which number sentence can be used to find how much money Marcy needed in order to buy the apples?
- a) $(6 \times 0.35) - 0.50$ b) $(6 + 0.35) + 0.50$
c) $(6 - 0.35) + 0.50$ d) $(6 \times 0.50) - 0.35$

- 20) What part of the model is shaded?

- a) 0.003
b) 0.03
c) 0.3
d) 3.0



- 21) On a class field trip, there was 1 adult for every 8 students. If a total of 54 students and adults went on the trip, how many were students?

- a) 46 b) 47 c) 48 d) 62

- 22) A concert area was set up with 16 rows of chairs. Each row had 12 chairs. In addition, there were 9 chairs set up on the stage. Which expression can be used to find how many chairs there were in all?

- a) $(12 \times 16) + (12 \times 9)$ b) $(16 + 12) + 9$
c) $(16 \times 12) + (16 \times 9)$ d) $(16 \times 12) + 9$

- 23) How many millimeters are equivalent to 400 centimeters?

- a) 0.4 mm b) 4 mm
c) 40 mm d) none of these

- 24) Mr. Perkins needs 16 ounces of milk for a recipe. How many cups of milk does he need for the recipe?

- a) 2 c b) 4 c
c) 8 c d) none of these

25) Trent is 5 feet tall. His sister Elise is 30 inches tall. What fractional part of Trent's height is Elise's height?

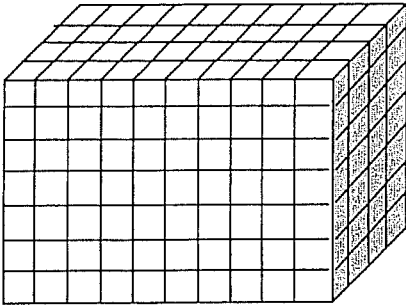
a) $\frac{1}{6}$

b) $\frac{1}{3}$

c) $\frac{1}{2}$

d) $\frac{2}{3}$

26) A rectangular prism is shown below.



The volume of this rectangular prism is

a) 138 cubic units

b) 70 cubic units

c) 276 cubic units

d) 280 cubic units

27) Bella made three times as many cupcakes as Eric. If E represents the number of cupcakes Eric made, which of the following could be used to find the number of cupcakes Bella made?

a) $E + 3 = ?$

b) $E \times 3 = ?$

c) $E \div 3 = ?$

d) $E - 3 = ?$

28) Which of these situations could be described by the expression below?

$$c + 2\frac{1}{2}$$

a) Lia jogged c miles yesterday, and $2\frac{1}{2}$ farther today.

b) Lia jogged c miles yesterday, and $2\frac{1}{2}$ miles fewer today.

c) Lia jogged $2\frac{1}{2}$ miles yesterday and c miles fewer today.

d) Lia jogged $2\frac{1}{2}$ miles yesterday and c times as far today.

29) What value for z makes this equation true?

$$8 \times 37 = (8 \times 30) + (8 \times z)$$

a) 7

b) 8

c) 30

d) 37

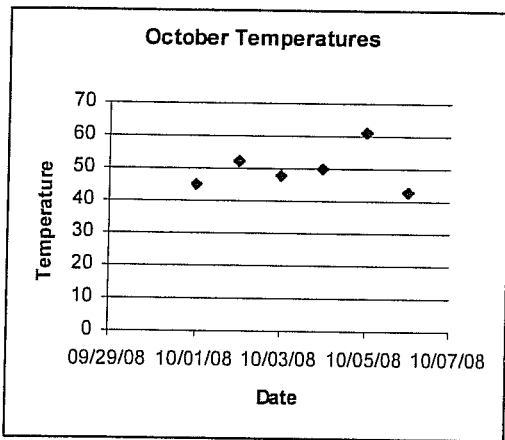
30) Some fifth-grade students recorded the temperature outside on 6 days in October. The data are shown in the table below.

October Temperatures

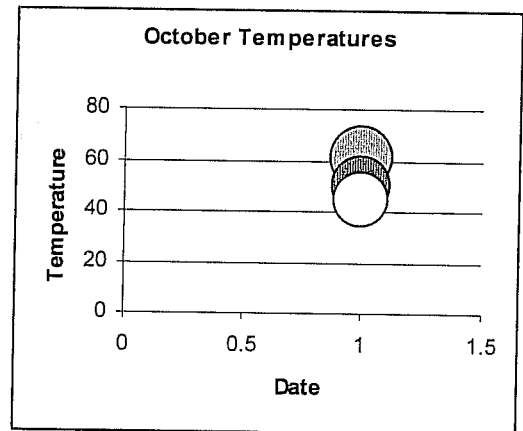
Date	°F
10/01/08	45
10/02/08	52
10/03/08	48
10/04/08	50
10/05/08	61
10/06/08	43

Which graph is the most appropriate method of displaying this data?

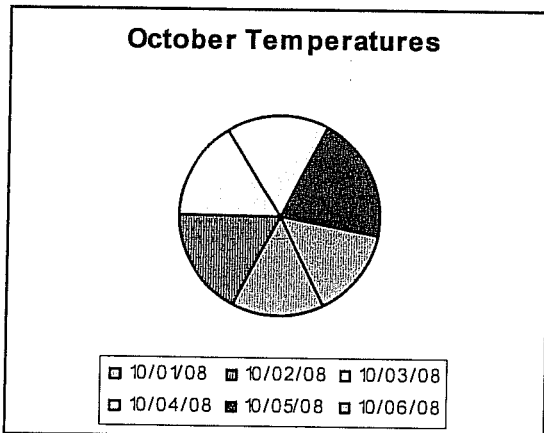
a)



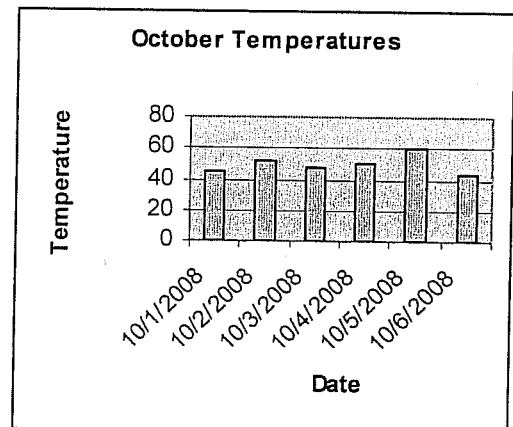
b)



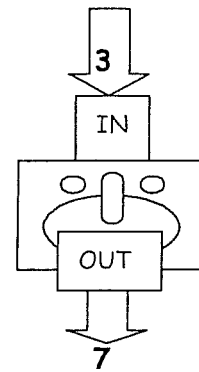
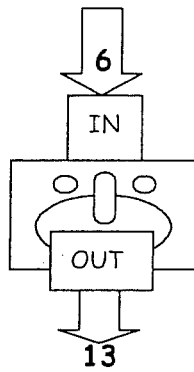
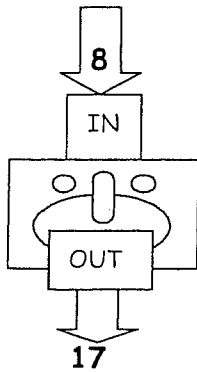
c)



d)



- 31) The picture below shows what happened when different numbers were put into the same number machine.



Which could be the rule used in this number machine?

- a) Multiply by 3, then subtract 5
b) Multiply by 2, then add 1
c) Add 9
d) Subtract 4
- 32) If $N = 4$, what is the value of $6 \times N - 3$?
a) 6
b) 9
c) 18
d) 21
- 33) If $z = 3$, what is $5 \times (6 - z)$?
a) 10
b) 15
c) 27
d) 53
- 34) In which sequence of numbers does the denominator always increase when the number is written in fractional form?
a) 2, 0.2, 0.02, 0.002
b) 0.02, 0.03, 0.04, 0.05
c) 0.0005, 0.05, 0.5, 5
d) 0.25, 0.025, 0.25, 0.026
- 35) Jon has $\frac{3}{5}$ of a dollar, Pasha has \$0.65, Marie has $\frac{7}{10}$ of a dollar, and Karen has \$0.62. Who has the **smallest** amount of money?
a) Jon
b) Pasha
c) Marie
d) Karen
- 36) What is a prime factor of the composite number 18?
a) 3
b) 5
c) 6
d) 9
- 37) A company donated 200 books to a local library. If 70 of them are fiction, what percent of the donated books is fiction?
a) 35%
b) 40%
c) 60%
d) 65%

38) Which table represents values of x and y such that $y = x + 5$?

a)

x	y
-1	4
0	5

b)

x	y
-1	6
0	-5

c)

x	y
2	5
5	0

d)

x	y
2	3
3	0

39) Sherry studied this group of fractions.

$$\frac{2}{3} \quad \frac{2}{4} \quad \frac{2}{5} \quad \frac{2}{6}$$

What is true about the value of the fractions?

- a) Increasing the denominator increases the value of the fraction.
- b) If the denominator stays the same and the numerator increases, the fraction names a smaller amount.
- c) Increasing the denominator by adding 2 cuts the size of the fraction in half.
- d) If the numerator stays the same and the denominator increases, the fraction names a smaller amount.

40) There are 36 fifth graders in art class. The art teacher wants to arrange their pictures on the wall so that one is in the first row, two are in the second row, three are in the third row, etc...How many rows of pictures will there be?

- a) 8 rows
- b) 9 rows
- c) 10 rows
- d) 11 rows

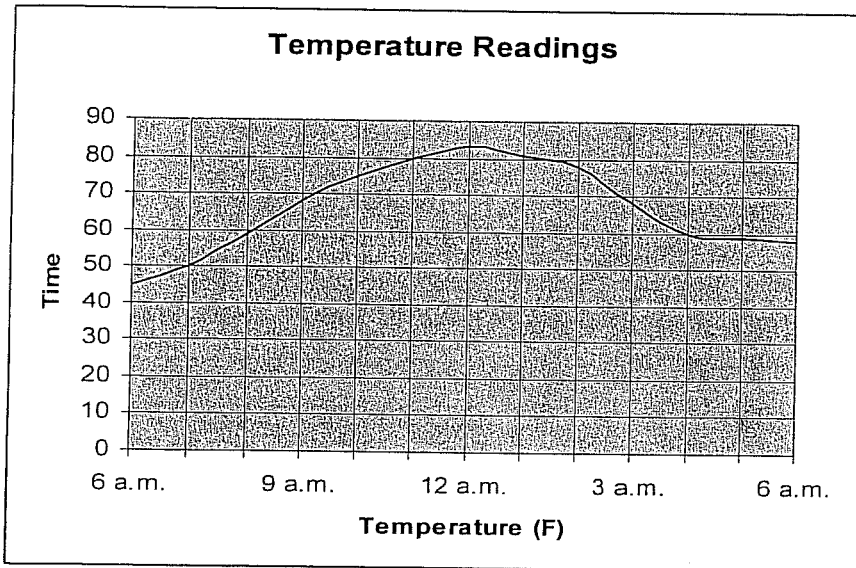
41) Write the decimal number that has the specified place values: 5 tens, 2 tenths, 6 hundreds, 7 ones, 3 hundredths.

- a) 65.723
- b) 327.56
- c) 657.23
- d) 627.53

42) Write the decimal as a fraction or mixed number in lowest terms: 0.504

- a) $\frac{1}{254,016}$
- b) $\frac{63}{12}$
- c) $\frac{63}{125}$
- d) $\frac{1}{504}$

43) The science class did an experiment. A jar containing water and a thermometer was placed outside for twelve hours. Every hour the temperature was recorded. About how many degrees did the temperature increase from 7 a.m. to noon?



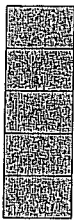
a) 83 degrees

b) 45 degrees

c) 38 degrees

d) 33 degrees

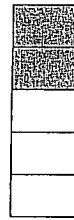
44) This is 1.



What is ?



+



?

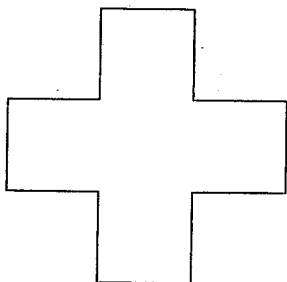
a) $1\frac{1}{5}$

b) $\frac{2}{5}$

c) $\frac{1}{2}$

d) $\frac{2}{3}$

45) Find the area. All segments are equal.



7 cm

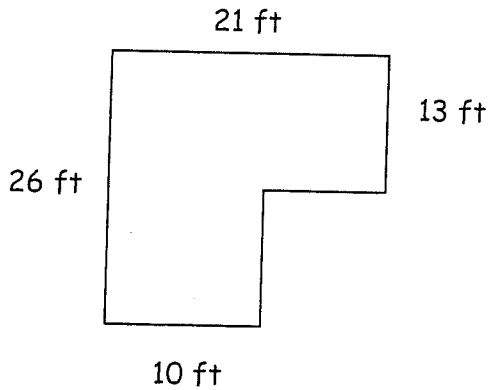
a) 147 cm^2

b) 245 cm^2

c) 196 cm^2

d) 84 cm^2

46) Find the area.



a) 507 ft^2

b) 377 ft^2

c) 403 ft^2

d) 416 ft^2

47) What fraction is not equal to the others?

$$\frac{13}{3} \quad \frac{132}{20} \quad \frac{117}{27} \quad \frac{130}{30}$$

a) $\frac{13}{3}$

b) $\frac{132}{20}$

c) $\frac{117}{27}$

d) $\frac{130}{30}$

48) What number comes next?

2, 3, 5, 7, 11, 13, _____

a) 15

b) 17

c) 19

d) 21

49) A telephone company charges \$0.39 for the first minute and \$0.22 for each additional minute for a long distance phone call. How much would a 10 minute long distance call cost?

a) \$2.37

b) \$2.59

c) \$3.90

d) \$2.20

50) How much would it cost to carpet a 25 ft by 13 ft room if carpet cost \$15.50 per square yard?

a) \$5,037.50

b) \$559.72

c) \$419.79

d) \$1,679.17

Southeast Bulloch High School Fifth & Sixth Grade Mathematics Tournament
April 19, 2008
Fifth Grade Division Item Analysis

Number	Answer	Percent Correct
1.	C	89%
2.	D	90%
3.	D	76%
4.	B	86%
5.	B	68%
6.	D	85%
7.	B	84%
8.	D	76%
9.	C	92%
10.	B	73%
11.	C	84%
12.	D	27%
13.	A	83%
14.	C	62%
15.	B	70%
16.	D	53%
17.	B	82%
18.	A	90%
19.	A	91%
20.	B	77%
21.	C	76%
22.	D	87%
23.	D	72%
24.	A	50%
25.	C	61%
26.	D	71%
27.	B	92%
28.	A	86%
29.	A	83%
30.	A	59%
31.	B	92%
32.	D	94%
33.	B	83%
34.	A	50%
35.	A	75%
36.	A	89%
37.	A	57%
38.	A	45%
39.	D	74%
40.	A	76%
41.	C	86%
42.	C	66%
43.	D	64%
44.	A	84%
45.	B	46%
46.	C	47%
47.	B	55%
48.	B	36%
49.	A	51%
50.	B	36%