2016

MATH SUPER BOWL

Fifth Grade

Individual Test

25 minutes – No Calculators

Answers must be recorded on the scantron to be counted.

1. Solve. $(3 \times 4) \times (8 + 1) \times (8 - 6) =$

   A. 98
   B. 168
   C. 216
   D. 224
   E. Not Given

2. Your sister drove 117 miles in 2.25 hours. What's the average speed that she was traveling?

   A. 108 mph
   B. 45 mph
   C. 52 mph
   D. 58 mph
   E. Not Given

3. Nick bought a pack of 50 trading cards. He gave his 4 brothers 3 cards each. He then gave 2 of his friends 4 cards each. Which equation can be used to find the number of cards Nick has left?

   A. $50 - (4 \times 3) - (2 \times 4) = ?$
   B. $50 - (3 \times 2) = ?$
   C. $50 - (2 \times 4) = ?$
   D. $50 - (4 \times 3) + (2 \times 4) = ?$
   E. Not Given

4. The average rainfall in New York City is 50.187 inches. What is the average rainfall when rounded to the nearest tenth?

   A. 50 inches
   B. 50.2 inches
   C. 50.19 inches
   D. 51 inches
   E. Not Given

5. Which is a solution to the inequality $9 + 2x > 5x$?

A. 2
B. 3
C. 4
D. 8
E. Not Given

6. Paolo and his family were driving on their summer vacation. Paolo wanted to drive for a total of three hours and to arrive 30 minutes before they were to meet friends for lunch at 12:15? What times should they leave from their house?

A. 8:45 a.m.
B. 9:15 a.m.
C. 8:15 a.m.
D. 9:45 a.m.
E. Not Given

7. Lara wants to take 6 friends with her ice skating for her birthday. It costs $6.50 for each person to ice skate. How much will it cost for everyone in their group to ice skate?

A. $35.50
B. $39.00
C. $45.00
D. $45.50
E. Not Given

8. Jeff needs to buy 2,400 erasers for his school district. If the erasers come in boxes of 800, how many boxes should he buy?

A. 2 boxes
B. 8 boxes
C. 16 boxes
D. 3 boxes
E. Not Given

9. Jan collected stamps. She has 50 stamps and 26% of them are foreign. How many stamps are foreign?

A. 13
B. 24
C. 18
D. 15
E. Not Given

10. Paolo bought a one year subscription to a gaming magazine for $54.00. How much is the gaming magazine for one month?

A. $4.00
B. $4.50
C. $5.00
D. $5.50
E. Not Given

11. Jeff didn't study for his math test. On Thursday he took the test and only scored 25%. Friday he retook the same test and got a score of 75%. If there were 100 questions on the test, how many more questions did Jeff get right on the Friday test than on the Thursday test?

A. 100 questions
B. 75 questions
C. 50 questions
D. 25 questions
E. Not Given

12. Asher was saving coins that his dad had given him. When he looked at the 17 coins that he had he realized that he had twice as many pennies as dimes and he had a total of 76¢. How many nickels does Asher have?

A. 1
B. 8
C. 5
D. 3
E. Not Given

13. There are three owls in a tree. One owl hoots every 3 hours, a second owl hoots every 8 hours, and a third owl hoots every 12 hours. If they all hoot together at the start, how many times during the next 60 hours will *just two* owls hoot together?

A. 2 times
B. 3 times
C. 5 times
D. 20 times
E. Not Given

14. Heidi wrote the number pattern: 7, 14, 21, 28, 35 . . . She asked Valerie what number sentence could be used to determine the tenth number in the pattern.

A. 7 x 63 = ?
B. 7 x 10 = ?
C. 63 x 10 = ?
D. 63 – 9 = ?
E. Not Given

15. Jeremy drove his race car 10% farther using gasoline from the Arco station compared to gasoline from the 76 station. After Jeremy filled his gas tank at the 76 station, he traveled on 480 miles. How far did he travel on a tank of gas from the Arco station?

A. 4800 miles
B. 470 miles
C. 580 miles
D. 528 miles
E. Not Given

16. At the Dodger game Mike wanted to buy a hot dog for $5.75, a drink for $2.99 and chips for $2.50. If he gets ¼ off his total purchase, how much will all three items cost?

A. $11.24
B. $2.81
C. $14.05
D. $8.43
E. Not Given

17. A total of 453 people entered the bike race. Money from the entrance fees was being donated to cancer research with the exception of 5% of the fees collected which will be used to pay for operating expenses. If the entrance fee was $28 for each participant, how much money was raised for cancer research?

A. $12,049.80
B. $12,684.00
C. $6,342.00
D. $634.20
E. Not Given

18. Lucia made 226 cards for to sell at the craft show during the month of May. Seventy-eight of the cards with flowers on them sold for $5 each. Eighty-three had drawings of animals and sold for $3 each. The remaining cards were just plain and they sold for $2 each. At the end of the show she had twenty-seven plain cards that didn't sell. How much money did Lucia make selling her cards during the month of May?

A. $387
B. $188
C. $695
D. $715
E. Not Given

19. One case holds 2 cartons. Each carton holds 3 boxes. Each box holds 4 bundles. Each bundle holds 5 envelopes. Each envelope holds 6 pencils. What is the greatest number of pencils that one case can hold?

A. 120
B. 720
C. 20
D. 126
E. Not Given

20. There are 23 classrooms at Santa Cruz School. All of them have at least one class pet. Use the clues below to find out how many classrooms have only a lizard as a class pet.
    - 10 classrooms have snakes and 2 classrooms have three different kinds of class pets.
    - 14 classrooms own fish, but no classroom has only fish and snakes.
    - 4 classrooms don't have a snake but have a lizard and some fish.
    - Twice as many classrooms have fish than classrooms that have lizards.

    A. 6
    B. 8
    C. 7
    D. 1
    E. Not Given

21. What is 40% of 50?

    A. 10
    B. 16
    C. 20
    D. 25
    E. Not Given

22. The prime factorization of a number is 2, 3, 3, and 3. Which of these numbers below is the number?

    A. 199
    B. 54
    C. 162
    D. 184
    E. Not Given

23. Hector is decorating some cookies. He wants to buy 3 tubes of colored icing and 2 cans of frosting. Each tube of colored icing costs 79¢ and each can of frosting costs $1.29. How much will these items cost in total?

    A. $3.00
    B. $4.95
    C. $5.45
    D. $7.74
    E. Not Given

24. Jack was buying a new bike that was $350. There was a sale this weekend for $30 off your purchase. Jack put $110 down to hold the bike until he got more money. Then his mom gave him ½ of the balance for his birthday. Which of these expressions could be used to find the amount of money Jack still owes for the bike?

A. $350 - 110 + 30 \div 2$
B. $350 - (110 - 30) \div 2$
C. $[350 - (110 - 30) \div 2]$
D. $[350 - (110 + 30)] \div 2$
E. Not Given

25. On Saturday morning four women (Veronica, Earla, Maria, and Susana) went to the bakery with their daughters (Jill, Stacy, Brittany, and Amelia) and split a bakery item. Each mother-daughter pair chose a different bakery item. One pair chose a lemon bar. Who is Brittany's mother?

- Amelia's mother is neither the woman who split a scone nor Veronika.
- Earla's daughter isn't Stacy or Amelia.
- Susana didn't want a muffin.
- Jill told her mom she didn't want a cookie this time.
- Brittany and Earla are not related, and neither of them wanted a scone or a muffin.
- Susana's daughter thought the scone was delicious.

A. Veronica
B. Earla
C. Maria
D. Susana
E. Cannot determine

Congratulations! You've completed the individual portion of the 2016 Math Super Bowl!

Math Superbowl - 2016

5th Grade Individual Test Part II

5 questions in 30 minutes <u>with</u> calculators

Only answers on the answer sheet will be counted

1. I am an even 3-digit number between 700 and 825 whose digits total 11. I do not contain a 4. None of my digits repeat themselves. What number am I?

2. Use the digits 0 – 9 one time each to complete the problems below. What digit goes in the shaded box?

$$\square \times \square - \square - 3 = 64$$

$$\square\square \times \square = 64$$

$$(\square\square - (\square \times \square) = 64$$

3. 3 + 4 + 5 are 3 consecutive whole numbers that add up to 12. What 5 consecutive whole numbers add up to 200?

4. I started school when I was in kindergarten at Fort Lowell in Tucson. I moved to California, where I attended 1st-12th grades. From there I spent 1/4 of my time in college at UCSB before I transferred to the University of Arizona where I stayed for 1/6 of my college studies. I spent the last 7 years of my college studies completing my Ph. D. at Stanford. From the time I started Kindergarten through the time I complete my Ph. D., how many years did I go to school?

5. How many triangles are in Figure 23?

Figure 1

Figure 2

Figure 3

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5th Grade Team Test

5 questions in 30 minutes with calculators done in groups of up to 4 students
Only answers on the answer sheet will be counted

1. Hector won the lottery and got 8 million dollars, after taxes. On the first day he spent $1. On the second day he spent $2. On the third day he spent $4. On the fourth day he spent $8. His spending doubled every day until he ran out of money. On which day did Hector finish spending his money?

2. What is the largest 3-digit number that is divisible by both 7 and 8 without a remainder?

3. Janet, Maria, and Fawn went to the farm to pick apples. They picked 120 apples in all. Janet picked twice as many as Maria picked. Maria picked 3 times as many as Fawn did. How many apples did they each pick?

4. Three bags contain a large number of 3s, 5s and 7s. Pick numbers from the bags so that their total is 30. How many combinations are possible?

5. A group of 5th grade students at Rosales Elementary School spend their lunch time making headbands. Each student uses a different color to identify which headbands are theirs. They also have a favorite decoration to glue on the top of their headbands. Use the clues to determine the first and last name of each student, their favorite decoration, and their headband color.

1. The person with the purple headbands and Lucia Hutchison are both new at making headbands.
2. The student with a yellow headband with ice cream on top was admiring the purple headband that the girl with the last name of Branch made.
3. Emilia loves to glue different types of flowers on her red headbands. Her latest creation has a rose with real thorns in it.
4. When lunch was over, the 5 students got in line. Abbey was in front of the girl with the last name of Stevens. Behind them was the girl wearing a blue headband, the girl wearing a headband with ribbon, and Lucia.
5. On Wednesday, the girl with the last name of Pettler and Emilia were absent. Ellen, Marty, and the girl with the green headband decided not to make headbands that day with 2 of their friends being absent.
6. Ellen Cooper does not have a red headband. Marty does not like to glue stars on hers.
7. The student with the last name of Pettler was asked if her headbands were green. "No, all the green headbands have a bird on them." she said. "All of mine have Ice Cream on top."

	Abbey	Emilia	Ellen	Marty	Lucia	Flower	Ice cream	Bird	Stars	Ribbon	red	yellow	green	blue	purple
Branch															
Cooper															
Pettler															
Hutchison															
Stevens															
red															
yellow															
green															
blue															
purple															
Flower															
Ice cream															
Bird															
Stars															
Ribbon															

Part 1

5th grade 2016 - Answer Key

1. C
2. C
3. A
4. B
5. A
6. A
7. D
8. D
9. A
10. B
11. C
12. B
13. B
14. B
15. D
16. D
17. A
18. D
19. B
20. D
21. C
22. B
23. B
24. D
25. A

Name _____ School _____

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5th Grade Individual Part II

Answer Sheet

1. _____

2. _____

3. _____, _____, _____, _____, _____

4. _____ years

5. _____ triangles

ANSWER KEY

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5th Grade Individual Part II

Answer Sheet

1. 812

2. 7

3. 38, 39, 40, 41, 42

4. 25 years

5. 530 triangles

Part 1

Answer Key – 6th grade test 2016

1. D
2. C
3. C
4. B
5. C
6. A
7. D
8. C
9. B
10. B
11. A
12. A
13. D
14. B
15. A
16. C
17. C
18. D
19. C
20. C
21. E
22. D
23. A
24. B
25. B

School _____

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5th Grade Team Test

Answer Sheet

1. _____ day

2. _____

3. _____ Janet _____ Maria _____ Fawn

4. _____ combinations

5. Last Name First Name Decoration Color

Branch _____

Cooper _____

Pettler _____

Hutchison _____

Stevens _____

ANSWER KEY

Math Superbowl - 2016

5th Grade Team Test

Answer Sheet

1. ___23rd__or 23____ day

2. ___952_____

3. ___72_____ Janet ____36____ Maria ___12_____ Fawn

4. _____7_____ combinations

5.

Last Name	First Name	Decoration	Color
Branch	Marty	ribbon	purple
Cooper	Ellen	stars	blue
Pettler	Abbey	ice cream	yellow
Hutchison	Lucia	bird	green
Stevens	Emilia	flower	red