

# **2016 MATH SUPER BOWL**

## **Sixth Grade Individual Test**

25 minutes – No Calculators  
*Answers must be recorded on the scantron to be counted.*

1. Which of the following sets of angles CANNOT be used to construct a triangle?
- A. three acute angles
  - B. two acute angles and one right angle
  - C. two acute angles and one obtuse angle
  - D. two right angles and one acute angle
  - E. Not Given
2. In 1969 the price of a movie ticket was \$3.00. In 1970 the price was increased by 15 percent. In 1971, the 1970 price was decreased by 5 percent. What was the price of a movie ticket in 1971?
- A. \$3.62
  - B. \$3.45
  - C. \$3.28
  - D. \$2.55
  - E. Not Given
3. The following list shows the number of centimeters of snow that fell each day at China Peak. What was the average snowfall for these ten days?  
14 cm, 13 cm, 7 cm, 3 cm, 11 cm, 14 cm, 108 cm, 84 cm, 63 cm, 28 cm
- A. 63 cm
  - B. 14 cm
  - C. 34.5 cm
  - D. 345 cm
  - E. Not Given
4. An architect made a scale drawing of a house to be built. The scale is 2 inches to 3 feet. The house in the drawing is 24 inches tall. How tall is the actual house?
- A. 18 ft.
  - B. 36 ft.
  - C. 72 ft.
  - D. 22 ft.
  - E. Not Given

5. Laura bought a shirt online. It was advertised as 20% off. The online company charged her \$3.00 for shipping. If she paid a total amount of \$39.00 what was the original price of the shirt?
- A. \$42.00
  - B. \$78.00
  - C. \$45.00
  - D. \$36.00
  - E. Not Given
6. Oscar's bike is twice as heavy as Elena's bike, but only 3 pounds heavier than Juan's bike. If Juan's bike weighs 15 pounds, how much does Elena's bike weigh?
- A. 9 pounds
  - B. 12 pounds
  - C. 6 pounds
  - D. 18 pounds
  - E. Not Given
7. The students at Washington High School will sell wrapping paper to raise money for their trip to Washington D.C. The statistics from the wrapping paper company show that one out of every 5 people asked will buy a roll of wrapping paper. Based on the company's statistics, if Mariana asks 355 people, how many rolls of wrapping paper could she expect to sell?
- A. 5
  - B. 65
  - C. 355
  - D. 71
  - E. Not Given
8. Baron's Pizza Place has a choice of thick or thin crust. The toppings available are mushrooms, onion, pepperoni, and sausage. Considering the different types of crust, how many possibilities are there for a pizza with two different toppings?
- A. 6
  - B. 8
  - C. 12
  - D. 18
  - E. Not Given

9. Fifteen cups of flour are to be stored in containers. Each container holds  $2\frac{1}{3}$  cups. How many containers will be needed to store the flour?
- A. 15
  - B. 7
  - C. 5
  - D. 6
  - E. Not Given
10. The cell phone company allows users 450 free text messages. Any text over the allowed amount costs \$0.25 per message. Brian only has \$26, how text messages can he make without spending more than \$26?
- A. 104 messages
  - B. 554 messages
  - C. 246 messages
  - D. 399 messages
  - E. Not Given
11. Carlos went for a long hike and burned 675 calories in  $2\frac{1}{2}$  hours. Mario decided to go for a bike ride and burned 1,125 calories in  $3\frac{3}{4}$  hours. Find out how many more calories one of the boys burned per hour than the other.
- A. 30 calories per hour
  - B. 450 calories per hour
  - C. 48 calories per hour
  - D. 100 calories per hour
  - E. Not Given
12. At the anniversary party  $\frac{4}{7}$  of the cake was eaten. The next day Pedro ate part of what was left. When he was done there was  $\frac{3}{14}$  of the cake left. How much did Pedro eat?
- A.  $\frac{3}{14}$
  - B.  $\frac{11}{14}$
  - C.  $\frac{8}{14}$
  - D.  $\frac{5}{14}$
  - E. Not Given

13. Three ducks and two ducklings weigh 32 kg. Four ducks and three ducklings weigh 44kg. All ducks weigh the same and all ducklings weigh the same. What is the weight of two ducks and one duckling?

- A. 15 kgs
- B. 18 kgs
- C. 10 kgs
- D. 20 kgs
- E. Not Given

14. Last year there were 520 students at Miramar School. The projected enrollment for this year compared to last year will be +29 students in kindergarten, -53 students in sixth grade and +16 students in first grade. What is the total expected enrollment for this year?

- A. 618 students
- B. 512 students
- C. 520 students
- D. 533 students.
- E. Not Given

15. A ribbon that is  $22\frac{3}{4}$  inches long must be cut into 7 equal pieces. How long will each piece be?

- A.  $3\frac{1}{4}$  inches
- B.  $5\frac{3}{4}$  inches
- C. 7 inches
- D. 15 inches
- E. Not Given

16. Thomas built a fence around his rectangular shaped garden. The posts are 2 yards apart, there are 4 posts along the width of the garden and 7 posts along the length. What is the area of the fenced in garden?

- A. 36 square yards
- B. 112 square yards
- C. 72 square yards
- D. 18 square yards
- E. Not Given

17. Sue won 40 bouncy balls at the school carnival. She gave 3 balls to each of her friends. She only has 7 balls remaining. How many friends does she have?

- A. 3
- B. 7
- C. 11
- D. 14
- E. Not Given

18. The sum of three consecutive number is 78. What is the amount of the smallest number?

- A. 78
- B. 42
- C. 35
- D. 25
- E. Not Given

19. Jeremy is making cookies for a party but his brothers keep eating them as he makes them. Jeremy can make 14 cookies in 30 minutes but his brothers eat 2 cookies every 10 minutes. How long will it take Jeremy to accumulate 6 dozen cookies if his brothers keep eating his cookies at the same rate? (12 = 1 dozen)

- A. 2 hours 30 minutes
- B. 3 hours 10 minutes
- C. 4 hours 30 minutes
- D. 5 hours 10 minutes
- E. Not Given

20. The preschool teacher has a set of blocks that are made up of 12 different shapes and 4 different colors. Every shape comes in every color. How many blocks are in the set?

- A. 16
- B. 24
- C. 48
- D. 60
- E. Not Given

21. My car uses  $3\frac{1}{3}$  gallons of gasoline per hour when I'm driving on the highway. How many gallons will it use after 6 hours?

- A. 22 gallons
- B. 18 gallons
- C. 9 gallons
- D. 6 gallons
- E. Not Given

22. Mr. Garcia put \$325 into a savings account that pays 8% interest per year. How much money will he have in the account in one year?

- A. \$26
- B. \$317
- C. \$333
- D. \$351
- E. Not Given

23. Maria spent \$2.87 on  $3\frac{1}{2}$  pounds of bananas. How much did she spend on each pound of bananas?

- A. \$0.82
- B. \$0.83
- C. \$0.87
- D. \$2.87
- E. Not Given

24. The rectangular top of a table is twice as long as it is wide. Its width is  $1\frac{1}{4}$  meters. What is the area of the tabletop?

- A.  $2\frac{1}{2}$  square meters
- B.  $3\frac{1}{8}$  square meters
- C.  $3\frac{1}{2}$  square meters
- D.  $1\frac{1}{4}$  square meters
- E. Not Given

25. There were five children, including Patty, who made a dessert to enter in the school bake-off. Each child made a different dessert, including the one who made a cake. They each made their dessert at a different location, including someone's grandma's house. Use the clues to find out who made the candy.

- Since she lives close by, Shelly made her dessert at her aunt's house. Luke, who didn't bake at home, makes really good pies.
- One person made pudding at their neighbor's house.
- Harlan made his dessert at school in the snack kitchen.
- Ethan couldn't bake at home, nor did the person who baked cookies.
- Patty didn't make candy, the person who made candy didn't make dessert at school.

- A. Ethan
- B. Shelly
- C. Luke
- D. Patty
- E. Not Given

**Congratulations! You have finished the individual portion of the  
Math Super Bowl test 2016.**



# Math Superbowl - 2016

## 6<sup>th</sup> Grade Individual Test Part II

5 questions in 30 minutes with calculators  
Only answers on the answer sheet will be counted

1. At a party, there are 72 people. The ratio of men to ladies to kids is 4 to 3 to 2. How many men are there? How many ladies are there? How many kids are there?
2. Use the digits 0 – 9 one time each to complete the problems below. What digit goes in the shaded box?

$$1 \square / 2 \square = \square \square / 100 = .48$$

$$\square \times . \square \square = 6 \square \%$$

$$1 / \square = \square 6 \frac{2}{3} \%$$

3. I am a positive 3-digit number less than 501. 1/3 of my digits are odd. I am an odd number but the product of my 3 digits is even. The digit in the tens place is larger than the digit in the hundreds place. The product of the first two digits is one less than the digit in the ones place. What number am I?

4. How many squares are in Figure 23?

Figure 1

Figure 2

Figure 3

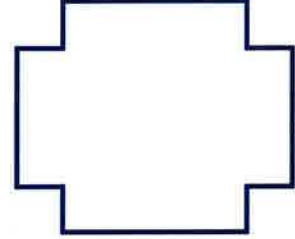
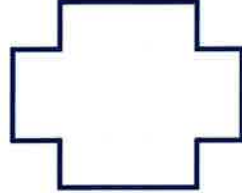
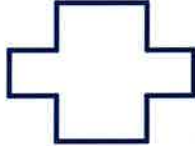
Figure 4

(2 squares)

(8 squares)

(16 squares)

(26 squares)



5. 16 painters were hired to paint the UCSB Thunderdome. After  $2\frac{3}{4}$  days they completed exactly half the job. At that point, 14 of the painters were reassigned to paint the University Center. Working at the same rate, how many days will it take the 2 remaining painters to complete the Thunderdome?

# Math Superbowl - 2016

## 6<sup>th</sup> 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. A square handball court wall with side length of 12 feet requires 6 pints of paint to paint the entire wall. How many pints of paint will be needed to paint the larger square handball court wall with side lengths of 18 feet?
2. Anne ordered 13 chicken tacos for her family. 9 tacos had cilantro, 3 had onions, 8 had salsa. 4 had both cilantro and salsa but no onions. 3 had cilantro, onions, and salsa. How many tacos had no cilantro, no salsa, and no onions?
3. Mrs. Carrillo opened a bag that contained only brown, yellow, green and blue M&Ms. The fewest of any color in the bag was brown, of which there were 17. The difference between the number of brown and yellow M&Ms is equal to the difference between the number of yellow and green M&Ms, and is also equal to the difference between the number of green and blue M&Ms. If there are 53 blue M&Ms, how many total candies are in the bag?
4. Kristy builds wooden dollhouse furniture. She uses the same kind of legs to make 3-legged stools and 4-legged tables. She has a supply of 58 legs and wants to use them all to make stools and tables. How many different combinations of tables and stools can she make using all the legs in each situation?

5. Adventure racing is a sport that requires a coed team to kayak, trek, and mountain bike while navigating through an unmarked course, looking for checkpoints. Adventure Medical Kits Adventure Racing Team is the 3-time defending national champions. Over the past 8 years, their team has grown and changed. The current members are Kyle, Garret, Mari, Rob, and Jarad. Use the clues to determine each person's last name, where each person is from, how long they have been with the team, and their strength.

1. Kyle, who is from Oakland, has been with the team for more than 3 years.
2. Mari is not from Melbourne.
3. The teammate whose strength is endurance has been with the team for 5 years.
4. Garret Bean, the person who has been on the team the longest, and the person whose strength is paddling raced together in Alaska for a 1<sup>st</sup> place finish.
5. Neither Garret nor Rob is from Lake Tahoe, but one is from San Francisco and the other has been on the team for 3 years. Rob is not the leader of the team.
6. Mr. Peter is the team leader. Mari is one of the top mountain bikers in the world.
7. Rob, whose last name is not Kohlar and is not from Melbourne, is the team navigator. He has won orienteering events around the world.
8. The teammate whose last name is Chandler lives in an RV and moves around from place to place. Her RV is currently parked in Lake Tahoe.
9. Jarad, the newest teammate, is the strongest paddler on the team.

	Bean	Kohlar	Chandler	Peter	Preston	San Francisco	Oakland	Melbourne	Lake Tahoe	Victoria	3	8	3	5	1	Endurance	Leadership	Biking	Paddling	Orienteering	
Kyle																					
Garret																					
Mari																					
Rob																					
Jarad																					
Endurance																					
Leadership																					
Biking																					
Paddling																					
Orienteering																					
3																					
8																					
3																					
5																					
1																					
San Francisco																					
Oakland																					
Melbourne																					
Lake Tahoe																					
Victoria																					

Name \_\_\_\_\_ School \_\_\_\_\_

**Math Superbowl - 2016**  
6<sup>th</sup> Grade Individual Part II  
Answer Sheet

1. \_\_\_\_\_ men \_\_\_\_\_ ladies \_\_\_\_\_ kids

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_ squares

5. \_\_\_\_\_ days

# ANSWER KEY

## Math Superbowl - 2016

6<sup>th</sup> Grade Individual Part II

Answer Sheet

1.   32   men       24   ladies     16   kids

2.   0  

3.  249 

4.  596  squares

5.   22   days

School \_\_\_\_\_

## Math Superbowl - 2016

6<sup>th</sup> Grade Team Test

Answer Sheet

1. \_\_\_\_\_ pints

2. \_\_\_\_\_ tacos

3. \_\_\_\_\_ M&Ms

4. \_\_\_\_\_ combinations

5. First Name Last Name Home Town Years on Team Strength

Kyle \_\_\_\_\_

Garret \_\_\_\_\_

Mari \_\_\_\_\_

Rob \_\_\_\_\_

Jarad \_\_\_\_\_

# ANSWER KEY

## Math Superbowl - 2016

6<sup>th</sup> Grade Team Test

Answer Sheet

1. \_\_\_13.5 or 14\_\_\_ pints
2. \_\_\_3\_\_\_ tacos
3. \_\_\_140\_\_\_ M&Ms
4. \_\_\_5\_\_\_ combinations
5. First Name Last Name Home Town Years on team Strength

Kyle      Peter      Oakland      8      Leadership

Garret      Bean      San Francisco      5      Endurance

Mari      Chandler      Lake Tahoe      3      Biking

Rob      Preston      Victoria      3      Orienteering

Jarad Kohlar      Melbourne      1      Paddling