2019 Bomber Math Bonanza 7th-8th Grades

Sponsored by:
Crigler Insurance, Archibald and Co. Architects, and INTERA

Mental Math – Answer Sheet

Final Total

School Name:

Team ID:

Final Total:

Student Name:

#	Answer	Score 1	Score 2
1			
2			
3			
4			
5			
6			
7			
8			
	Sum:		

2019 Bomber Math Bonanza 7th-8th Grades

Sponsored by:
Crigler Insurance, Archibald and Co. Architects, and INTERA

Mental Math – Answer Key

Final Total

#	Answer
1	40 [minutes]
2	24 [ways]
3	3
4	12
5	0.56
6	($)140
7	7 [nickels]
8	45π [inches]

2019 Bomber Math Bonanza 7th-8th Grades

Sponsored by:
Crigler Insurance, Archibald and Co. Architects, and INTERA

Mental Math

Final Total

1	Classes are 50 minutes long. On Fridays, classes are ⅕ shorter. How long are classes on Friday?
2	How many ways can the word SALT be rearranged?
3	What is the average of 1, 3, 5, and 3?
4	The hypotenuse of a right triangle is 13 inches, and the shortest leg is 5 inches. What is the length of the missing side?
5	What is 0.7 times 0.8? Express your answer as a decimal.
6	David makes 14 dollars an hour. After 10 hours of work, how much did David make?
7	Peter's meal at a restaurant costs $39.65. He paid with two $20 bills, but the restaurant could only give him his change in nickels. How many nickels should Peter receive?
8	Kiara has a cylindrical cage for her 5 hamsters. If the cage has a radius of 3 inches and a height of 5 inches, what is the volume of the cage? Express your answer in terms of pi.

2019 Bomber Math Bonanza 7th-8th Grades

Sponsored by:
Crigler Insurance, Archibald and Co. Architects, and INTERA

Mental Math – Solutions

Final Total

#	Answer	Solution
1	40 [minutes]	If classes are ⅕ shorter, that means they are 10 minutes (⅕ of 50) shorter. 50-10=40 minutes.
2	24 [ways]	There are four letters in the word SALT meaning that you can use 4! 4! = 4 x 3 x 2 x 1 = 24
3	3	To find the average of a set of numbers you add them all up and then divide by the number of numbers in the set. In this case, the average is (1+3+5+2+4+3)/6, or 18/6. Your final answer is 3.
4	12	Solution 1: One of the Pythagorean triples is 5, 12, and 13. This means the unknown side must be 12. Solution 2: Using the Pythagorean theorem, you can find the unknown side by subtracting 5^2 from 13^2. This results in 144 (169-25). We know that 144 is equal to 12^2, so the unknown side must be 12.
5	0.56	0.7 *0.8 = 7*8*0.01
6	($)140	If David is making $14 per hour and he works for 14 hours, then he will make the equivalent of 14×10, or $140.
7	7 [nickels]	Peter pays $40 (2 $20 bills) instead of $39.65, which means he needs $0.35 in change ($40-$39.65). 35 / 5 = 7 total nickels
8	45pi [inches]	The base is 9 pi in area, and the height is 5. 9 pi x 5 = 45pi