6th Grade

 Consider the number 24. Let A be the sum of all the positive factors. Let B be the sum of the proper factors, including 1. Let C be the number of integer factors. Find C(^B / _A).	ANSWERS
 2. Let B = the number of distinct ways you can misspell BERRY. Let S = the number of distinct ways you can spell SIMMONS. Let T = the number of distinct ways you can spell TOURNAMENT, if the "words" must begin and end with T. Find B – S + T. 	
 3. For the set of numbers: {28, 108, 92, 56, and 81} Find the mean Find the median Find the range Your answer is the median of those three numbers. 	
 4. Let A = the probability of getting heads when you flip one coin. Let B = the probability of drawing a spade from a standard deck of cards. Let C = the probability of randomly drawing an A or B if the letters of BLACKBEARS are placed individually in a hat. Find ABC. 	
5. What is the sum of all integers 1 through 5000?	

Team Ciphering	6 th Grade	Round	2
1. Find the measure of the sma of a standard clock at 5:32. Ca	aller angle formed by t Ill that A.	ne minute and hour hands	ANSWERS
Let B be the complement of	the angle A.		
Let C be the supplement of t	he angle B.		
Find $\frac{C-B}{A}$			
2. Let $3 \Rightarrow 81 = 4$ and $4 \Rightarrow 2$ Find ($6 \Rightarrow 216$) $\Rightarrow (4 \Rightarrow 64)$.	= ½.		
3. Let A = LCM(48,64) Let B = GCF(48.64)			
Let $C = A + B$ Let $D = 48 + 64$			
Find D/C.			
4. Let A = arithmetic mean of	0.4 + 0.04 + 0.004 + 0.	0004	
Let C = the area of the trian Find ABC.	gle with side lengths of	6, 10, and 8.	
5. Let A = the simplified value	e of $(-2)^2 - 2$.	/r ¹ //2 2)	
Let C = the number of ways themselves in a line	the four team membe	ers can arrange	
Let D = the number halfwa	y between $^{1}/_{3}$ and the	midpoint of $\frac{1}{2}$ and $\frac{1}{3}$.	
Find AB + CD			

Team Ciphering	6 th Grade	Round 3
 If you roll three numbers shown Multiply that nu factors. Add to that the Write your answer in the 	dice, what is the probability that the pro- is odd? Imber by the smallest natural number wind quotient of $\frac{666666}{333}$. The box.	ANSWERS oduct of the ith exactly 5
 Let S = the 50th term Let I = the 20th digit in Let X = the number of Find SIX. 	in the sequence: 1, 2, 2, 3, 3, 3, 4, In the decimal representation of $^{1}/_{7}$. If zeros at the end of 20!	
 3. Let A = the number of and black socks to guara Let B = the probability Let C = the number of on a 4x4 grid. Let D = base 10 value Find AC + BD. 	of socks that must be drawn from a draw intee having 2 of the same color. y of rolling a sum of 7 using two fair dice f squares with integral side lengths that of $11_2 + 11_3 + 11_4 + 11_5$.	ver full of blue can be found
 4. Let A = 1 more than Let B = 1 less than the Let C = 1 times the su Find A+B+C. 	riangle.	
5. What is the value of $A = 2^2 + 9$ G = 30 - 4 ²	(J + A + G + S) - (B + U + C + S) if: $B = 13 + \sqrt{4}$ $C = 63 - 8^2$ $U = 1$ $J = \sqrt{100} + 7$ $S = 17 - \sqrt{16} + 6^2$.7 – 42 + 30

Team Ciphering	6 th Grade	Round 4
1. Let $S = \frac{1}{4} + \frac{2}{3}$ Let $D = \frac{3}{5} - \frac{1}{6}$ Let $P = \frac{1^2}{5} \times 3$ Let $Q = \frac{2}{3} \div \frac{1}{2}$ Find $S + D - P \times Q$		ANSWERS
 Find the difference of -4 Find the product of -2(- Find the sum of 52 + - 5 Find the quotient of -51 Find the value of BER²Y. 	4 and 6. Call this B. 1)(-3). Call this E. 4. Call this R. / 17. Call this Y.	
 For the set of numbers Let M = the mean Let A = the mode Let T = median Let H = the range Find the range of M, A, T and the range 	{1, 2, 2, 4, 5, 5, 5, 6, 8, 8, 9, 9} nd H.	
4. Let $A =$ the number of c Let $B =$ the number of d Let $C = A + B$ Let $D = A - B$	igits in the product 234 x 345 igits in 2.5 x 10 ⁸	
Find C/D.		
5. Find the area of a rectar with area 16π , and whose c	gle whose length is twice the diameter liagonal is 5!/3!.	r of a circle