

6<sup>th</sup> grade ciphering  
VHHS 2013

1-1	What is the least common multiple of 16, 24, and 36?	144
1-2	Simplify $\sqrt{169} + \sqrt{144} + 10^2$ .	125
1-3	Find the value of ☺ if ☺=1,111,111+1,111,111+111,111 .	2,333,333
1-4	Find the number of distinct arrangements of the word BUBBLE.	120
1-5	What is the sum of the number of days in a non-leap year plus the number of feet in a mile?	5645
2-1	A bag contains 5 red marbles, 5 blue marbles, and 9 yellow marbles. What is the probability of drawing a red marble followed by a blue marble if the first marble is not replaced?	25/342
2-2	Simplify and write as a mixed number: $4\frac{1}{5} + 1\frac{2}{5} + 3\frac{3}{10}$ .	$8\frac{9}{10}$
2-3	A lasagna recipe calls for 3.5 pounds of noodles. How many pounds of noodles, written as an improper fraction, are needed to make one-third of a recipe?	7/6
2-4	Scalene triangle <i>ABC</i> has side lengths that are the three smallest integers that could create such a triangle. Find the perimeter of triangle <i>ABC</i> .	9
2-5	Find the sum of the two-digit numbers less than 50 that have 2 for at least one of the digits.	331
3-1	Simplify: $\frac{\pi}{3} \cdot \frac{6}{9} \cdot \frac{18}{\pi} \cdot \frac{\pi^3}{2} \cdot \frac{\pi^2}{2}$	$\pi^5$
3-2	Find $7_8 \times 6_8$ in base 8.	52
3-3	What is the 9 <sup>th</sup> term in the Fibonacci sequence? (The first two terms are 1, 1.)	34
3-4	How many prime numbers are between 50 and 70?	4
3-5	How many seconds are in three days?	259,200
4-1	Find the sum of the digits of <i>n</i> if $n = 1111 + 111.1 + 11.11 + 1.111 + 0.1111$ .	20
4-2	Find the value of $K + E + V + I + N$ if $A = 1, B = 2, C = 3, ..., Z = 26$ .	61
4-3	How long (in hours) will it take a bus, moving at 60 mph, to travel 210 miles?	3.5
4-4	Write 123 in binary form.	1111011 <sub>2</sub>
4-5	Find the area of a right triangle with hypotenuse 13 and one leg 5.	30