Name_____ School_____

JUNIOR DIVISION
Category 1: Signed Numbers
CALCULATORS NOT ALLOWED

1. (2 pts) $-(-4+1)-(1-8)=$ 1. _____

2. (3 pts) $2 \bullet (-4) - (10 \div (-1) + 10 \div 5 + (-8))$ 2. _____

3. (5 pts) $\dfrac{-2(5-8-(-3))}{-6} + \dfrac{1}{-3} - \dfrac{1}{-6} - \dfrac{-6}{6}$ 3. _____

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Category 2: Statistics, Mean, Median Mode

1. (2pts) Using the list below which is the largest, the MEAN, the MEDIAN or the MODE?

18, 3, 8, 13, 8, 10, 11, 4

1. _____

2. (3 pts) List five numbers that satisfy the following conditions:
The mean is 75, the median is 80, and the modes are 60 and 80.

2. _____, _____, _____, _____, _____

3. (5pts) Justin took four tests and his average score was 79%. What score does he need to get on his next test to bring his average test score up to 83%?

3. _____%

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Category 3: Scientific Notation

CALCULATORS NOT ALLOWED

1. (2Pts.) Simplify (if necessary), then convert to Scientific Notation:

   A. 4,700 + 13,200 1A. _____

   B. 0.0000407 1B. _____

2. (3Pts.) Convert to Scientific Notation

   A. 123×10^{6} 2A. _____

   B. 850×10^{-3} 2B. _____

   C. 0.00107×10^{-3} 2C. _____

3. (5Pts.) Find the value of x.

$$\frac{(8\times10^{2})(5\times10^{3})}{(2\times10^{5})(2\times10^{-2})}\div10^{2}=10^{x}$$

3. _____

Names _____ School _____

_____

_____

JUNIOR DIVISION

Category 4: Team
Factorization, LCM, Divisibility, and Primes

CALCULATORS NOT ALLOWED

Pass in only one paper.

1. (2Pts) What is the prime factorization of 792? 1. _____

2. (3Pts) What is the least common multiple of 6, 9, 10, and 21?

2. _____

3. (5 Pts) List all the prime numbers greater than 50 and less than 100.

3. _____