

Cedar Ridge Middle School Mathematics Tournament 6th Grade Written Test

October 27, 2012

1) Simplify: $1^0 + 2^3 + 3^2 \times 4^3$

- A) 585 B) 586 C) 1152 D) 25 E) NH

2) If $6 + x = 13$, what is the value of $2x - 6$?

- A) 7 B) 8 C) 6 D) 5 E) NH

3) A student had the following scores in math: 92, 100, 88, 77, 99, 85, and 96. That is the difference in the mean and the median of these scores?

- A) 14 B) 23 C) 3 D) 1 E) NH

4) A triangle has one angle that is a right angle and one angle that has a measure of 37 degrees. What is the measure of the third angle?

- A) 90 B) 127 C) 63 D) 57 E) NH

5) Which of the following represents the shortest length?

- A) 248 mm B) 21 cm C) 2 m D) 0.9 km E) NH

6) The April electric bill for \$125.80 was exactly half as much as the March electric bill. What was the total cost for electricity for March and April?

- A) \$287.20 B) \$374.40 C) \$387.40 D) \$188.70 E) NH

7) Scott made a stem-and-leaf plot to show his daily grades in math. What is the mean of these grades?

Stem	Leaf
6	0 5 6
7	4 6 8 8
8	2 5 8 9
9	1 2 5 6

- A) 81 B) 76 C) 54 D) 92 E) NH

8) What is the product of all the positive odd number factors of 60?

- A) 75 B) 225 C) 15 D) 97 E) NH

9) Find the sum of $10^1 + 10^0 + 10^{-1} + 10^{-2}$

- A) 17.19 B) 10.11 C) 19.17 D) 11.11 E) NH

- 10) Last week Sara walked to Annabelle's house three times along a path that is 1.3 miles. She returned home each time on a shortcut that is three-fourths of a mile. How many miles did Sara walk to get to and from Annabelle's house those three times last week?
- A) 6.15 miles B) 5.32 miles C) 3.55 miles D) 2.05 miles E)NH
- 11) If the area of a triangle is 30 cm^2 and the base is 12 cm, then what is the height?
- A) 2.5 cm B) 360 cm C) 5cm D) 24cm E)NH
- 12) What number must be substituted for the x to make the following equation true?
- $$1^3 + 2^3 + 4^3 + 5^x = 125$$
- A) 0 B) 1 C) 2 D) 5 E)NH
- 13) Express $\frac{7}{11}$ as a decimal.
- A) 0.636 B) 0.636 C) 0.63 D) 0.63 E)NH
- 14) Solve. Write your answer as a mixed number. $\frac{1}{2} + \frac{2}{3} \div \frac{3}{4}$
- A) $1\frac{7}{18}$ B) $\frac{25}{18}$ C) $1\frac{5}{6}$ D) $\frac{21}{24}$ E)NH
- 15) $\frac{3}{4} + 0.65 - \frac{1}{3}$
- A) 1.4 B) $1\frac{1}{15}$ C) 1.1 D) $\frac{1}{15}$ E)NH
- 16) What is the sum of the composite numbers between the square root of 25 and the square root of 400?
- A) 1080 B) 128 C) 145 D) 108 E)NH
- 17) Find the circumference of a circle if the radius is 2.5 km. Use 3.14 for pi.
- A) 15.7 km B) 7.58 km C) 19.625 km D) 17.5 km E)NH
- 18) What is 25% of 50% of 120?
- A) 90 B) 15 C) 45 D) 60 E)NH
- 19) If A= number of sides of a decagon and B=number of sides of a hexagon, find $AB - B^2$.
- A) 17 B) 60 C) 52 D) 24 E)NH
- 20) If $a@b = a^2 + b^2 - ab$, find $4@5$.
- A)20 B) 19 C) 21 D) 18 E)NH
- 21) Which equation does not have the same solution as the others?
- A) $13 + x = -6$ B) $-6 + x = 13$ C) $x + 13 = -6$ D) $-6 = x + 13$ E)NH

22) Change 111021_3 to base 10 notation.

- A) 354 B) 356 C) 357 D) 358 E)NH

23) Find $2.9 \times 2.4 + 6.3 \div 7.0$

- A) 10.9 B) 7.86 C) 18 D) 6.96 E)NH

24) Ken is mixing and bagging nuts, sesame seeds, and raisins for 24 students to take on a hike. He used 2 pounds of cashews, $1\frac{1}{2}$ pounds of walnuts, $2\frac{1}{4}$ pounds of peanuts, $1\frac{1}{8}$ pounds of sesame seeds, and 1.75 pounds of raisins. How many ounces of mix can Ken put in each bag so that each child has the same amount?

- A) 6 oz B) 5 oz C) 8 oz D) $\frac{1}{2}$ oz E)NH

25) Simplify: $\frac{\frac{16}{4}}{\frac{5}{7} + \frac{3}{5}}$

- A) $\frac{28}{9}$ B) $\frac{70}{23}$ C) $\frac{75}{24}$ D) $\frac{35}{11}$ E)NH

Tiebreakers:

TB1) 21 is what percent of 84?

TB2) Convert 4 yd, 1 ft, and 7 in to total inches.

TB3) Find k if the five digit number 64,98k is divisible by 2, 3, 4, and 9.