2011 RC Junior Math Mania
Algebra & Probability Team Test – 4th Grade

1. What is the product of 37 and 14?

2. When one card is drawn from a standard 52-card deck, what is the probability that it is red or a 9?

3. Solve for y: 42 + 3y = 60?

4. Four more than ½ of 30 is the same as ___ less than ½ of 40?

5. What is the mean of the data set {4, 19, 11, 37, 9}?

6. Find a value of *p* that makes p(p + 3) = 40 true.

7. The letters in the word GRISSOM are each written on a card and the cards are dropped in a bucket. If Haley draws one card from the bucket what is the probability she draws a consanant?

8. Evaluate **as a mixed number**: $4\frac{5}{8}+1\frac{1}{8}$

9. In how many ways can Abby, Bob, Cal and Dave arrange themselves in a row of four chairs?

10. Tom is three times as old as his sister. How old will he be in four years if his sister is now 7?

11. When 36 people were asked about their favorite heroes, 15 liked Harry Potter, 16 liked Percy Jackson, and 16 liked Danny Dunn. If 9 people liked Harry & Danny, 5 liked Percy & Danny, 7 liked Harry & Percy, and 2 liked all three, how many of the surveyed people liked none of these three heroes?

12. What is the median of the data set {2, 5, 3, 2, 7, 6, 5, 2, 2, 4, 7}?

13. In how many ways can the letters in the word "SNAKES" be arranged?

14. If today is Saturday, what day of the week will it be 111 days from today?

15. When the hidden number is reduced by 18 and this result is divided by 4, the final result is 52. What is the hidden number?

16. If Nicole has 11 shapes, all triangles and hexagons, and there are a total of 48 sides, how many of the shapes are hexagons?

17. Evaluate: $37^2 - 23^2$

18. If Randy drives at forty miles per hour for three hours and sixty miles per hour for two hours, what is the total distance Randy travelled?

19. An orange marble is drawn from a bag containing three orange marbles and two blue marbles and dropped in a second bag that contained 4 orange marbles and 6 blue marbles. If a marble is now drawn from the second bag, what is the probability that the marble drawn is blue?

20. If f(x) = 4x – 11, find f(22).

2011 RC Junior Math Mania
Geometry & Potpourri Team Test – 4th Grade

1. What is the least common multiple of 15 and 6?

2. What is the perimeter of a pentagon, in meters, with sides of length 13 m?

3. What is the missing term of the sequence 14, 17, 24, 35, 50, __, 92, 119, …?

4. 1 + 3 + 5 + 7 + 9 = 2 + 4 + 6 + 8 + ____

5. What is the surface area, in square meters, of a cube with edges measuring five meters?

6. A farmer is fencing a 24 foot by 20 foot rectangle yard. He needs to place the fence posts 4 feet apart. How many fence posts does he need?

7. What is 2385×32?

8. How many positive three-digit palindromes can be made with only odd digits? (Palindromes are numbers that read the same forwards or backwards like 242.)

9. What is the missing term in this combined sequence 3, 64, 7, 32, 11, __, 15, 8, 19, 4, 23?

10. Which of these units of measurement is best to measure the height of the door to your testing room: inches, feet, or miles?

11. What is the area, in square meters, of a right triangle with base measuring 4 meters and height measuring 7 meters?

12. How many positive integers are factors of 30?

13. How many of the following letters have at least one line of symmetry?

    A C E G I K M O Q S U W Y Z

14. If five points lie on a circle, how many line segments can be drawn connecting those points?

15. A regular polygon has vertices named with the letters A, B, C, etc. in clockwise order. If a line segment from B to F passes through the center of the polygon, how many sides does the polygon have?

16. How many prime numbers are between 20 and 35?

17. Using the numerals 2, 4, 6, and 7 exactly once each, and the operations of addition, subtraction, multiplication, and division (and parentheses) as many times as you like, write an expression that equals 24.

18. How many numbers between 50 and 100 are divisible by 7?

19. A 3x3x3 inch cube is cut into 27 1x1x1 inch cubes, when reassembled the cube is set on the table and all the visible surfaces are painted. How many of the 27 1 inch cubes are painted on two of their sides?

20. In the grid of unit squares to the right, you must travel from C to D by moving only right or down along the gridlines. In how many ways can this be done?