2012 Rocket City Junior Math Mania
Individual Test – 5th Grade

1. Evaluate: 377 + 44

2. A circle has a radius of 14 cm. What is the diameter of the circle, in centimeters?

3. If Anne can make three Christmas ornaments each hour and Babs can make two each hour, how many hours would it take them to make 45 ornaments working together?

4. Evaluate: $7\overline{)259}$

5. What is the volume, in cubic inches, of a cube with edges measuring 5 in?

6. 18 whole pizzas plus 19 half pizzas is the same as 12 whole pizzas and how many half pizzas?

7. Four electric grinders can grind 8 pounds of flour in 2 hours. How many pounds of flour would 8 grinders grind in 4 hours?

8. Evaluate: $\frac{1}{4}+\frac{1}{6}$

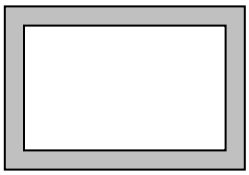
9. In how many ways can the letters in the word "CAR" be arranged?

10. What value of *d* satisfies the equation $4d+7=23$?

11. What is the next term of the sequence 2, 6, 18, 54, __?

12. Draw the largest circle that will fit inside a square with an area of 64 m^2. What is the area of the circle, in square meters? (Use $\pi = 3.14$)

13. A rectangular picture frame is 10 cm by 12 cm on the outside. The picture that fits inside is 8 cm by 10 cm. What is the area of just the picture frame?



14. Evaluate: 3^4

15. In a certain class, 7 students said they had only a Batman toy, nine students said they had only a Spiderman toy, and six students said they had both. What is the total number of Batman and Spiderman toys owned by the students this class?

16. A pasture contains both people and horses. If you can count 12 heads and 30 feet, how many horses are there?

17. How many positive three-digit numbers contain only even digits?

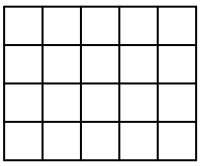
18. What is the sixth term of the geometric sequence with first term 5 and common ratio 2? The sequence begins 5, 10, 20, ...

19. If my piggy bank contains only dimes, nickels and pennies, and has fifteen coins worth a total of 48 cents, how many pennies are in the piggy bank?

20. What is the sum of the number of days in a week, the number of edges on a cube, and the number of seconds in a minute?

21. What is the mean (average) of the set {3, 11, 18, 8}?

22. How many squares of any size are in the array of unit squares to the right?



23. Emerson is three times as old as Frank. In four years, Emerson will be twice as old as Frank. How old is Emerson now?

24. When Mr. McHugh's class lines up for recess, Katie stands immediately behind Mary, Gus is ahead of Catherine, and a Micah is behind Katie. If Katie is behind Catherine, write the name of the first person in line followed by the name of the last person in line.

25. Jim has 99 cents using only quarters, dimes, nickels, and pennies. What is the smallest number of coins he could have?

26. When a single card is drawn from a standard 52-card deck, what is the probability that it is a red 6?

27. Round the number 1234.567 to the nearest tenth.

28. In how many different orders can you and two of your friends stand in line?

29. If one-fourth of a game takes 9 minutes, how long does one-third of the same game take?

30. A random letter from the word "TOMORROW" is chosen. What is the probability that "R" was the chosen letter?