2001 Mount Rainier Math Invitational
# Fifth Grade Individual Test

<u>Reduce</u> all fractions and answers may be left in terms of   or use 3.14 for . You will have 35 minutes for this test.

Questions 1-20 are worth 2 points each

1. Find the sum: 3 + 8 + 9 + 14

2. If I have $75, how many $15 whatszmahoozits can I buy?

3. If a fair six-sided die is rolled, what is the probability that a 5 is rolled?

4. How many degrees are in the sum of all three angles in a triangle?

5. If John watches TV two hours per day from Monday through Friday and two and one-half hours each on Saturday and Sunday; how many hours of TV does John watch each week?

6. What is 10 x 9 x 8 x 7 x 6 x 5 x 4 x 3 x 2 x 1 x 0?

7. Evaluate: (3000 – 1000) / 2 + 998.

8. If from a standard deck of 52 cards, 1 is lost, how many cards can be given to each of three players?

9. What is x in the following figure?
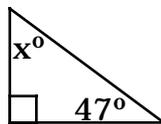
10. Find the sum of the first 10 positive integers: 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10.

11. What is the surface area of a cube with a side length equal to 5?

12. James' younger brother is 5 years old. In 10 years, James will be 4 times as old as his brother is now. How old is James now?

13. If one candy bar has 800 calories and I eat three-fourths of one bar and one-half of another, how many calories have I eaten?

14. Evaluate: 3b-12, when b=3.

15. Multiply the two fractions: $\frac{3}{5} \times \frac{1}{2}$.

16. What type of triangle is this?
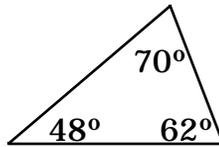
17. Solve for y: 3y+ 4 = 5y

18. In a bag, I have 4 blue marbles, 7 black marbles, and 2 orange marbles. What is the probability of randomly drawing a marble that is not orange?

19 Find the perimeter of the figure:
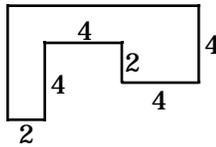
20. Multiply the decimals:

$$\begin{array}{r} 5.35 \\ \times 2.4 \\ \hline \end{array}$$

Questions 21-30 are worth 3 points each

21. A brick walkway 3 feet wide goes around an outdoor pool 10 feet wide and 30 feet long. How many square feet of walkway are there?

22. If there are 3 sets of twins in a room and everyone shakes hands with everyone else except their twin, how many handshakes take place?

23. If Bonnie averaged 60% on her first three tests, what does she need on her last test to have an overall average of 70%?

24. If today is Friday, what day was 328 days ago?

25. How many rectangles are in the following figure?
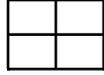
26. The probability that Mr. Smith will go to Smallville today is 1/3. If he goes to Smallville, the probability he visit Tiny Park is 1/4. If he visits Tiny Park, the probability he will buy a "mini-dog" is 1/5. What is the probability that Mr. Smith will buy a mini-dog in Tiny Park in Smallville today?

27. How many diagonals can be drawn in a hexagon?
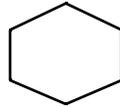
28. How many seconds were there in the year 1999?

29. Eric has $2.50 in change. What is the maximum number of coins he can have if he has no more than 17 pennies and no more than 11 nickels?

30. A triangle has a base of 9 and a height of 6. If I double all the dimensions of this triangle, what is the area of the <u>new</u> triangle?