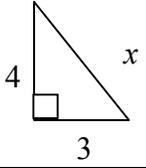


**Mount Rainier Math Invitational
Fifth Grade - February 1, 2008
Individual Test**

Put all answers on the colored answer sheet. All fraction answers must be reduced.

Problems 1 through 20 are worth 2 points each	
1	What is the sum of 1612 and 9435?
2	Evaluate: 170×59
3	Solve for x : $3x + 8 = 29$
4	What is the distance of the line segment from $(0, 53)$ to $(0, 476)$?
5	Find the area of a rectangle with sides seven and thirteen.
6	Evaluate: $64 \div 4 + 12 - 3 \times (4 + 4)$
7	What is the volume of a cube with side length 5?
8	What is the sum of the first five prime numbers?
9	Berta is shorter than Kelsey, who is shorter than Abbdule. Stacey is taller than Berta. Stacey has a cat. Abbdule is 2' 2" taller than Berta, who is 3" shorter than Kelsey, who is an inch shorter than Stacey. If Abbdule is 7' 2", how tall is Stacey, in inches?
10	What is the next term in the sequence 1, 9, 25, 49, 81, ...?
11	Every time Abbdule takes a step, Verda must hop four times to keep up. For every hop of Verda's, Stacey must jump rope two times. For each of Stacey's jumps, Kelsey must pogostick five times. How many times must Kelsey pogostick for each of Abbdule's steps?
12	 <p style="text-align: center;">What is the name of the side with length x?</p>
13	What is the length of x in the triangle from question 12?
14	What is the measure of the angle between the hour and the minute hand at six o'clock?
15	Jonne, Jakob, and Jinngul went to a store that sells three different types of spaghetti sauce. They want to get the most sauce for their money. The Heimer sauce is \$2 for 15.5 fl oz, the Schmidt sauce is \$6 for 30 fl oz, and the Barbossa is \$3 for 18 fl oz. How much would it cost for them to buy two jars of sauce with a 10% off coupon before tax?

16	Stacey has three pairs of pants, four shirts, and x pairs of socks. How many pairs of socks does Stacey have if she has twelve outfits? (An outfit is made of one pair of pants, one shirt, and one pair of socks).
17	What percent of 700 is 35?
18	Solve for x : $4x + 2x + x + \frac{1}{2}x + \frac{1}{3}x + \frac{1}{6}x = \frac{2^6}{2^2}$
19	Hillary bakes a plate of macaroons. Berduhh eats half of the macaroons, then Zoey (Kelsey's dog) eats a fourth of the remaining macaroons. Finally, Octagonne (Berduhh's pet spider) eats 10 of the macaroons. Unfortunately, Hillary only has two macaroons left. How many did she originally bake?
20	Every time Kelsey gets angry, she cuts off three inches of hair. She gets angry every time Hillary pops her gum or Stacey screams. For every time Hillary pops her gum, Stacey screams two times. If Hillary pops her gum four times, and Kelsey has 38 inches of hair, how long is Kelsey's hair after the whole ordeal?
	Problems 21 through 30 are worth 3 points each
21	Trevor is sick with a common cold. At the very beginning of his illness, he uses 5 tissues for the first 5 minutes. During every 5 minutes he uses 5 more tissues than he did the time before. If a box contains 600 tissues, how many minutes does it take him to use an entire box?
22	What is the surface area of a cube with side length 3?
23	How many times does seven evenly go into 43,104,685,924,027?
24	Evaluate and express as a mixed number: $1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots + \frac{1}{8}$
25	How many diagonals does regular octagon have?
26	Kelsey is hungry, so she decides to see what is in her fridge, where there are plenty of sandwich ingredients, so she is going to make a sandwich. There are 2 types of bread, 3 types of meat, 4 types of cheese, and 5 types of vegetables. How many distinct sandwiches can Kelsey make and eat if a sandwich consists of one type of bread, one type of meat, and one type of cheese?
27	There are five fish: Anna, Burdeh, Catherine, David, and Eric. The owner, Trevor, feeds them every day with fifty fish flakes. Anna, Burdeh, and Catherine eat at the rate of five fish flakes per minute. Eric eats at ten fish flakes per minute and David, who is anorexic, doesn't eat any. How long does it take for them to eat the fifty fish flakes?
28	Order the following from largest to smallest: 2^{33} , 3^{22} , 4^{16}

29	What is the mean of the mean, median, and mode of: {6, 14, 63, 95, 42, 1, 7, 6}? Express your answer as a mixed number.
30	Find the sum of the integers greater than -11 and less than 1.