

Name: \_\_\_\_\_

Heatherwood Mathletes  
Heatherwood Math Olympics 2003-2004: Test 1  
December 18, 2003

**A. Mixed Addition and Subtraction (2 points each)**

$$\begin{array}{r} 22 \\ + 15 \\ \hline \end{array}$$

$$\begin{array}{r} 58 \\ - 21 \\ \hline \end{array}$$

$$\begin{array}{r} 78 \\ + 44 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ - 48 \\ \hline \end{array}$$

**Addition/Subtraction Word Problem (4 points)**

Thirty-two penguins were sitting on a cliff. Eleven dived into the water. How many were left on the cliff?

**B. Multiplication (3 points each)**

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ \times 18 \\ \hline \end{array}$$

**C. Division (express fractions in simplest terms) (3 points each)**

$$9/3 =$$

$$49/7 =$$

$$43/7 =$$

$$66/8 =$$

**Multiplication/Division Word Problem (4 points)**

Alice and Beth picked some apples. Alice picked one-third as many as Beth. Beth picked 15. How many apples did Alice pick?

**D. Adding and Subtracting Fractions (3 points each)**

$$\frac{1}{3} + \frac{1}{3} =$$

$$\frac{1}{3} - \frac{1}{6} =$$

$$\frac{3}{7} + \frac{2}{3} =$$

$$\frac{2}{3} - \frac{5}{12} =$$

**E. Multiplying and Dividing Fractions (3 points each)**

$$\frac{1}{2} \times \frac{1}{2} =$$

$$\frac{3}{7} \times \frac{2}{3} =$$

$$1\frac{1}{2} \times \frac{1}{3} =$$

$$\frac{2/5}{3/2} =$$

**Fraction Word Problem (4 points)**

Matthew's class has 20 students. Half the students study math, a quarter study science, and the rest read. How many students read?

**F. Solve for  $x$  (4 points each)**

$$x + 7 = 10$$

$$5x + 10 = 30$$

$$5x - 10 = 11$$

**G. Write the Equation (5 points)**

Write the equation for the following problem. Don't solve it. What is the number that when you multiply it by 5 and add 5 you get 25?

**H. Advanced Word Problems (5 points each)**

**Problem 1.** Now solve the previous problem. What is the number that when you multiply it by 5 and add 5 you get 25?

**Problem 2.** Two students together weigh 150 pounds? One student is 10 pounds heavier than the other. How much does the heavier student weigh?

**Problem 3.** Consecutive numbers are whole numbers that follow in order, like 7,8,9,10,11,12. Find three consecutive numbers such that the sum of the first and the third is 32.