CML SAMPLE P 5-1

NAME _____

PYTHAGOREAN DIVISION MEET 1 NOVEMBER 6, 2014 GRADE 5

30 MINUTES

ANSWER COLUMN

Directions: Place your answer to each question below in the answer column.

1) If $\langle a,b,c\rangle$ means $[(a\times b)+(a\times c)]\div(b\times c)$, express $\langle 8,4,2\rangle$ in simplest form. 1) _____

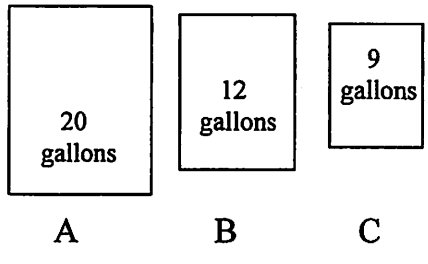
2) The scale on a map reads 1" = 150 miles. On the map Alacan is 3" from Batesville. Batesville is 3½" from Cheyton. The actual distance from Alacan to Cheyton could be anywhere from _____ miles to _____ miles. 2) _____

3) Mrs. Stevens has a full classroom of students with the same number of students in each row. Patricia is sitting in the 2nd row from the front of the room and the 4th row from the back. She is also the 4th student from the left of the room and the 3rd student from the right. How many students are there in Mrs. Stevens' class? 3) _____

4) Find the two numbers that are twice as far from 15 as they are from 24. 4) _____

5) Four (4) lemons plus 1 carrot weigh as much as 1 potato. Two (2) carrots and 1 potato weigh as much as 10 lemons. How many lemons weigh as much as 1 potato? 5) _____

6) Container A is filled with 20 gallons of paint. Container B holds 12 gallons, but is empty. Container C holds 9 gallons and is also empty. Paint is poured from A filling B. Paint is then poured from B filling C. The paint in C is poured back into A. The paint in B is poured into C. Paint is then poured from A filling B. Paint is poured from B filling C. The paint in C is poured into A. There are now _____ gallons of paint in A.



6) _____

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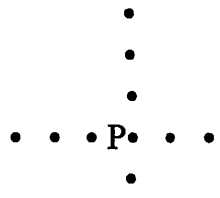
The answer to each question is in parentheses at the beginning of each solution.

1) (6) $\langle 8,4,2 \rangle = [(8 \times 4) + (8 \times 2)] \div (4 \times 2) = [32 + 16] \div 8 = 48 \div 8 = 6.$

2) (75; 975) The least distance from Alacan to Cheyton on the map would be ½". The greatest distance on the map would be 6½". If the 3 towns did not lie on a straight line, the actual distance between the two towns could be anywhere from 75 miles (½") to 975 miles (6½"). (Both answers must be correct to receive credit.)

3) (30) There are 5 rows with 6 students in each row.



4) (21 & 33) 24 - 15 = 9. Find 21 by breaking that difference, 9, into 3 parts. Make 1 part 3 from 24 and the other part 6 from 15. 24 - 3 = 15 + 6 = 21. Since 24 is 9 from 15, add another 9 to 24, namely 33, which will be 9 from 24 and 18 from 15. (Both answers must be correct to receive credit.)

5) (6) 4L + 1C = 1P. 2C + 1P = 10L. Replace 1P with 4L + 1C. 2C +(4L + 1C) = 10 L. If 3C + 4L = 10L, then 3C = 6L or 1C = 2L. Now replace 2L for 1C in 4L + 1C = 1P. 4L +(2L) = 1P and 6 lemons weigh as much as 1 potato.

6) (14) (A, B, C) respectively. (20, 0, 0) → (8, 12, 0) → (8, 3, 9) → (17, 3, 0) → (17, 0, 3) → (5, 12, 3) → (5, 6, 9) → (14, 6, 0).