

Math 141-Su'04

Quiz # 5

sections 5.1 - 5.2 - 6.1

Partial credit is based on the work shown.

4pts

1. **Without dividing**, answer each question yes or no, then **justify your answer** by **showing the divisibility test**.

a. Does  $7 \mid 24192$ ? \_\_\_\_\_

Show test used:

b. Does  $11 \mid 24192$ ? \_\_\_\_\_

Show test used:

3pts

2. Why do the divisibility tests for 2, 5, and 10 only depend on the number in the ones place?

8pts

3. a. Use factor trees to show the prime factors of 84 and 120.

b. What is the greatest common factor of 84 and 120?

c. What is the least common multiple of 84 and 120?

3pts

4. John plays tennis every other day, and Jennifer plays every third day. Some days they compete with each other. If they both played on Tuesday, on what day will John and Jennifer both play again? (Show all your work and list which problem solving strategy you used.)

2pts

5. Which fraction is smaller,  $\frac{5}{12}$  or  $\frac{7}{16}$ ? \_\_\_\_\_ (Show what you did to determine this.)