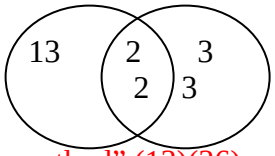
Math 141-Su'04 ____ NAME: ____ANSWERS_____

quiz # 6 20

sec 6.1-6.3, 7.1 Seat: _____

Partial credit is based on work shown!

52 36



5pts

1. Add and simplify, showing all your steps.

   52 = 4 · 13 = 2 · 2 · 13 and 36 = 4 · 9 = 2 ·2 · 3 · 3 so LCD = 468

   "build-up method" (13)(36) = 468

   or (52)(9) = 468

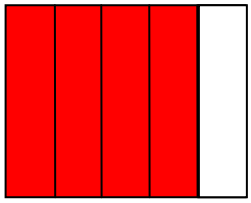
$$\frac{5}{52}+\frac{7}{36} = \frac{9}{9}\cdot\frac{5}{52}+\frac{7}{36}\cdot\frac{13}{13}=\frac{45}{468}+\frac{91}{468}=\frac{136}{468}=\frac{68}{234}=\frac{34}{117}$$

4pts

2. Illustrate $\frac{1}{2}of\frac{4}{5}$ using a rectangular diagram. Clearly label the diagram to indicate each fraction and the answer.

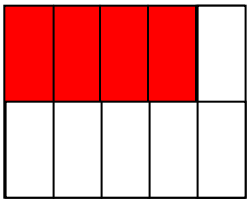
$$\frac{1}{2}of\frac{4}{5}=\frac{4}{10}$$

1/2



4/5

4/10



3pts

3. Calculate mentally using the distributive property. Show the steps you thought through.

$$6\left(7\frac{2}{3}\right) = 6\cdot\left(7+\frac{2}{3}\right)=6\cdot(7)+6\cdot\left(\frac{2}{3}\right)=42+4=46$$

4pts

4. Estimate $\left(4\frac{2}{3}\right)\cdot\left(8\frac{1}{4}\right)$, using

   a. range estimation

   Low: (4)(8) = 32

   High: (5)(9) = 45

   b. rounding

   (5)(8) = 40

4pts

5. Without dividing to change the following fractions to decimals, explain how to tell whether each fraction will be a terminating decimal. First simplify the fraction completely.

   a. $\frac{8}{48}=\frac{1}{6}$ Not a terminating decimal

   b. $\frac{6}{48}=\frac{1}{8}$ This will be a terminating decimal.

   The prime factors of 6 are 2 and 3. The prime factors of 8 are 2, 2 and 2.

   If the prime factors are only 2 and/or 5, then decimal will terminate; any other prime factors in the denominator of the simplified fraction would cause the decimal to be infinite repeating.