Post-GED Math:
Preparation for College

www.gedmathgraphics.net

by Howard Myers, Ed.D.

As your students complete their preparation for the GED, some of them may be looking forward to attending college. But to pursue college credit, they will need additional math preparation. Your program may or may not be able to support math study beyond the GED, but in any case you can insure that your students understand what their college plans are likely to entail.

Getting Admitted versus Earning College Credits

Specifically in New Jersey, a high school diploma or GED is the only academic qualification required for admission to a two year community college. However, college admission does not automatically open the door to enrollment in courses for college credit. Immediately upon admission, colleges require that students present SAT test results of about 520-540 (varies with each college) in both English and math, or alternatively take placement exams in both areas.

It seems well worth mentioning that the same college admission system applies to high school graduates as well. Though a common assumption holds that a “regular” high school diploma is somehow “better preparation” for college than a GED, it is important to recognize key differences between New Jersey college requirements for developmental math and New Jersey’s high school graduation requirements in math—as tested in the state’s High School Proficiency Assessment (HSPA).

Simply scan one of the many test preparation books for HSPA math. Compare the material to GED math, and especially to a college text for developmental math. The bottom line is that all three tests are different. One might think that high school material would lead logically to a next step in college, but at the basic math level in New Jersey that simply does not happen.

The College Placement Test – One More Hurdle

The college material is not as broadly focused as HSPA, but the coverage is deeper and more rigorous. In addition, though HSPA math uses calculators for the whole test, and GED math allows them for half of it, the college placement test does not allow calculators at all. It omits several newer topics added to HSPA and/or covered lightly in the GED, but does bore in much more intensively on the “nitty-gritty” of basic math. In summary, it’s a significant extra hurdle.

Thus the prospective GED student gains little in terms of preparation for college math by changing plan and switching back to high school. In terms of what happens when either type of high school diploma is presented for college admission, the result is almost always the same. Urban and/or disadvantaged students with no more than HSPA or GED-level preparation typically must enroll in one or more developmental courses in math, and often English as well, before actually beginning the college course work that will count toward an Associate Degree.

Realistic Planning Needed

This can be a major issue for low income students. Even if financial aid is available for a two year program, the assistance often runs out before completion of a degree. This is because the developmental course requirements typically stretch actual enrollment time beyond two years.

You can at minimum counsel your students accordingly. You might also contact the math department at your community college, and purchase sample copies of the developmental math course texts to show your students. You can quite possibly receive copies of the developmental curricula, if you explain your program goals and simply ask for them.

The point is to use tangible documents to help students form realistic expectations. Just a few minutes with the college texts should be sufficient to show that while many topics are quite similar to the GED's general math and linear algebra, students will need to demonstrate a command of the developmental material at a significantly enhanced level versus the GED. Or versus HSPA math as well, just in case they get the mistaken idea that a switch back to high school might represent a simple answer to the college math requirement.

Potential Study Materials

Regardless of how they get it, GED or HSPA completers must demonstrate mastery of this added level of developmental math before even beginning to work on college math credits. To illustrate and support extra efforts in this direction, sample materials are attached below. These may prove helpful for students who want to continue their math study.

One of the areas covered in GED texts is conversion of equivalent numbers: fractions to decimals to percents. Accordingly, I developed these charts and worksheets originally for GED classes, but quit using them because the material can be intimidating for many students and is lightly tested on the GED anyway.

I found that exercises with these charts offered little benefit for the average GED student, but were sometimes useful as a kind of validation for those who emerged with an affinity for math. Thus I did not include the material in GED prep, but attach it here for possible use by students who may want to solidify their mastery of GED math or progress beyond it.

CONVERT FRACTIONS AND DECIMALS

Fractions to Decimals

Divide the Top Number by the Bottom Number:

- For $\frac{1}{4}$ Divide 1 by 4:

$$
\begin{array}{r}
.25 \\
4\overline{)1.00} \\
\underline{8} \\
20 \\
\underline{20} \\
\end{array}
$$

- For $\frac{3}{8}$ Divide 3 by 8:

$$
\begin{array}{r}
.375 \\
8\overline{)3.000} \\
\underline{24} \\
60 \\
\underline{56} \\
40 \\
\underline{40} \\
\end{array}
$$

Decimals to Fractions

Say It In Words, Write as a Fraction, Reduce:

- For 0.25, Say “twenty-five hundredths.” Write: $\frac{25}{100} = \frac{1}{4}$

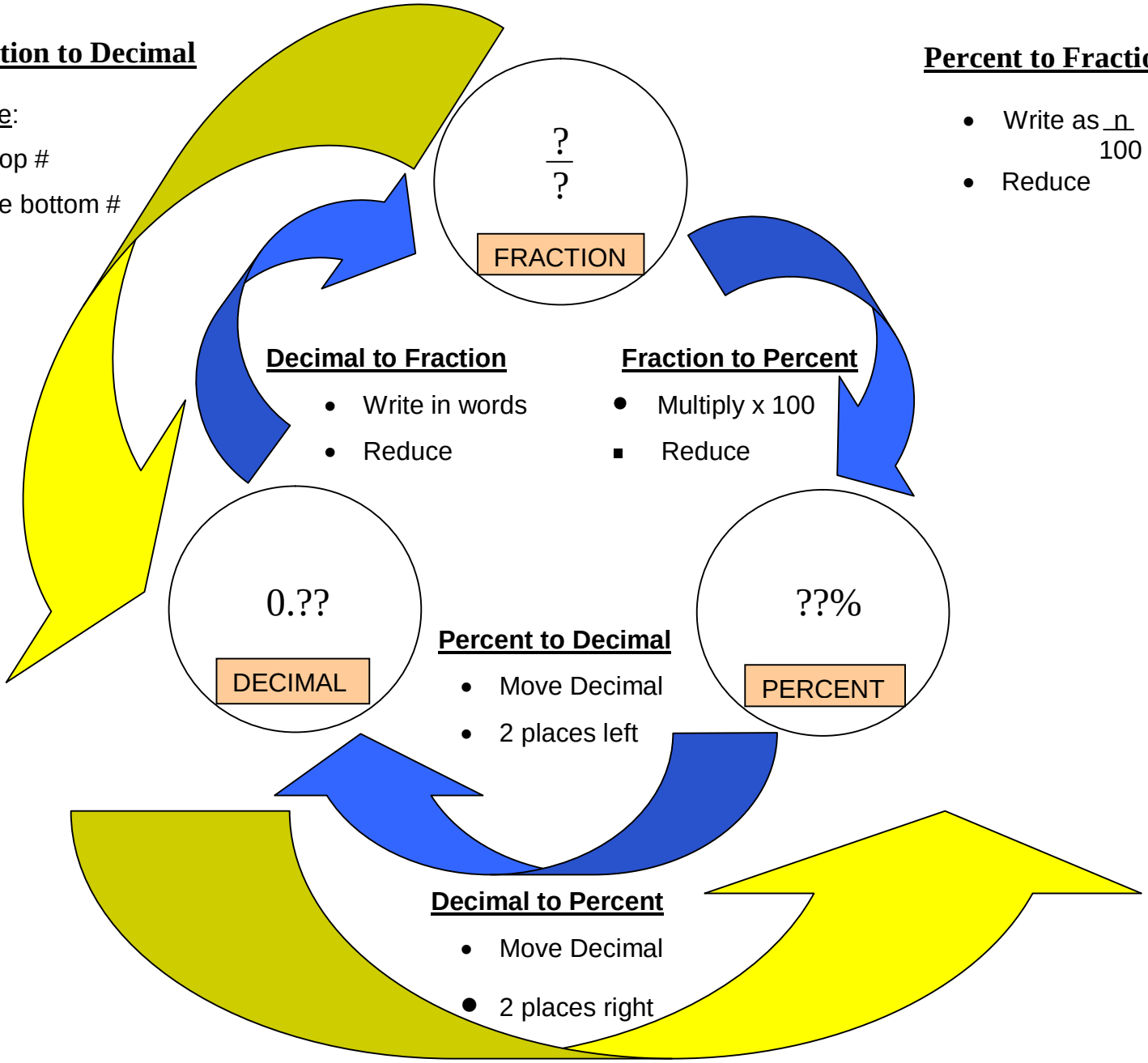
- For 0.375, Say “three hundred seventy-five thousandths.”

Write: $\frac{375}{1000} = \frac{3 \times 125}{8 \times 125}$

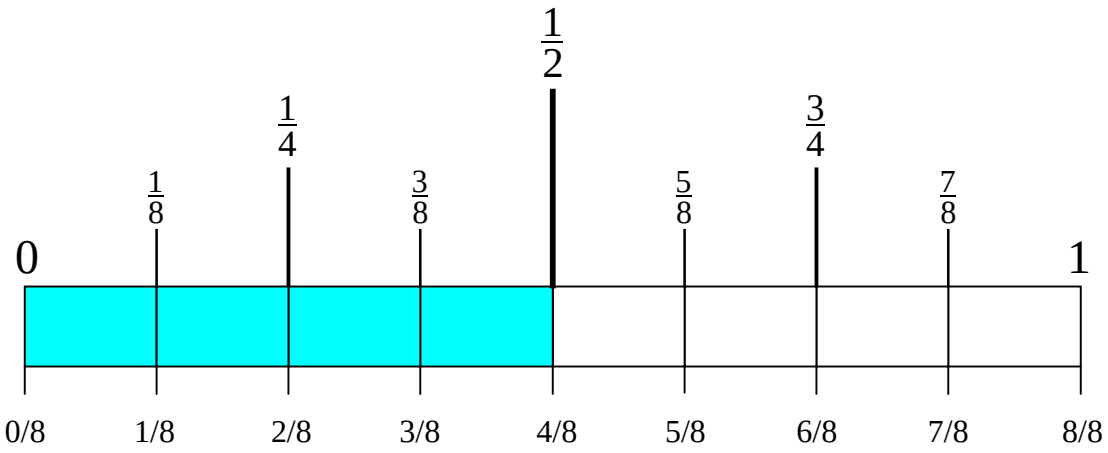
THE WHEEL OF FRACTIONS

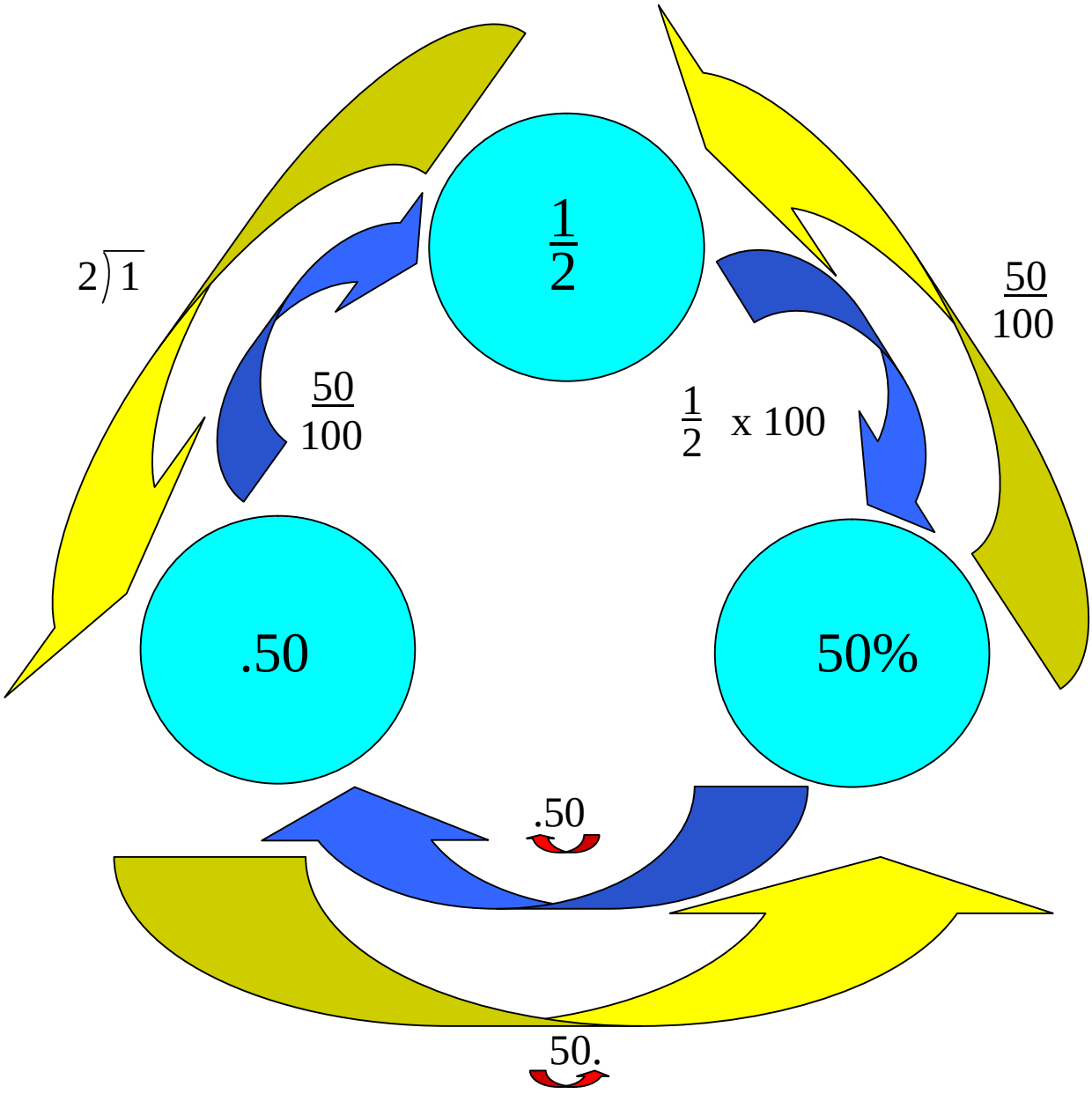
Convert from fractions to percents, to decimals, and back to fractions.

- This sheet tells how to go around "The Wheel of Fractions"
- Next is a set of 8 examples—the "Ruler Fractions"
- And finally, blank worksheets for practice.

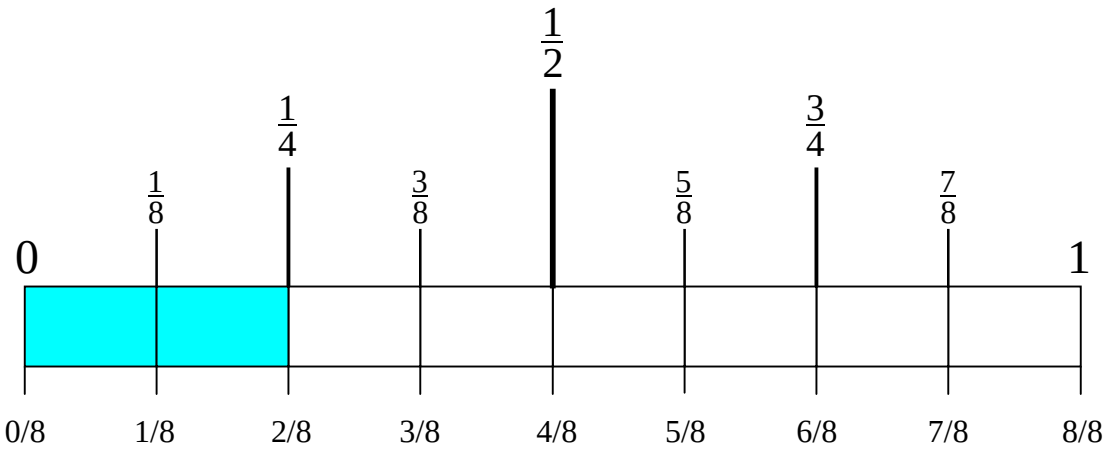


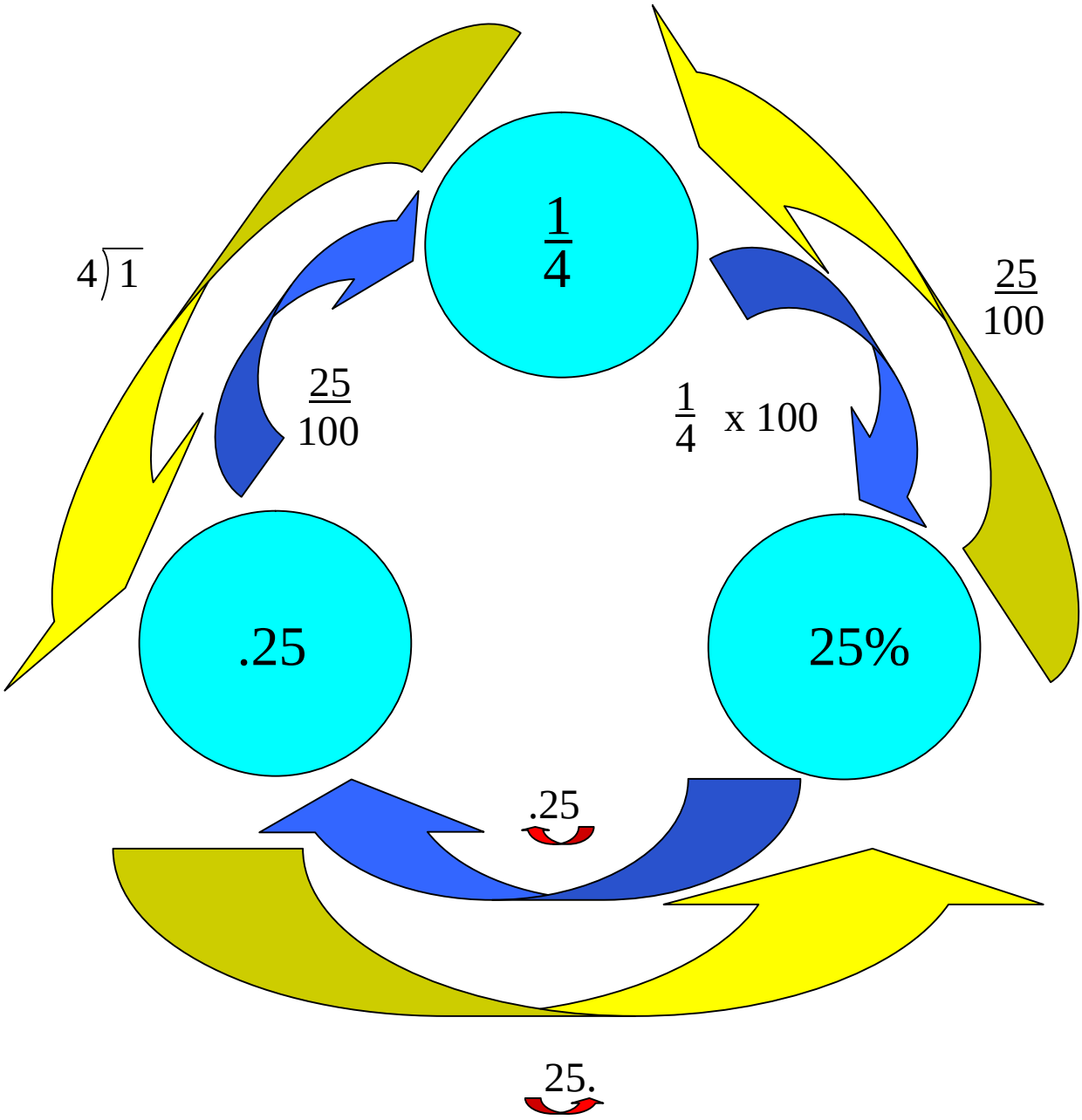
THE WHEEL OF FRACTIONS



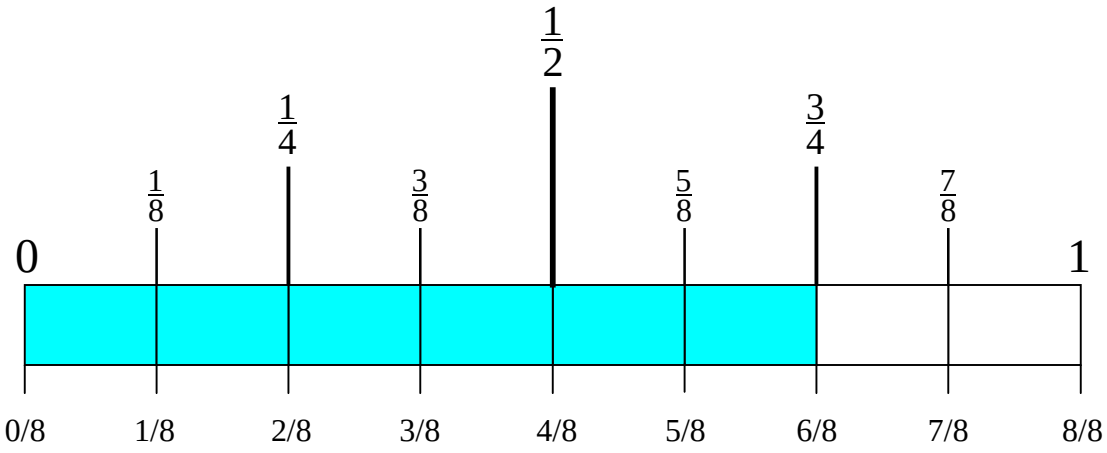


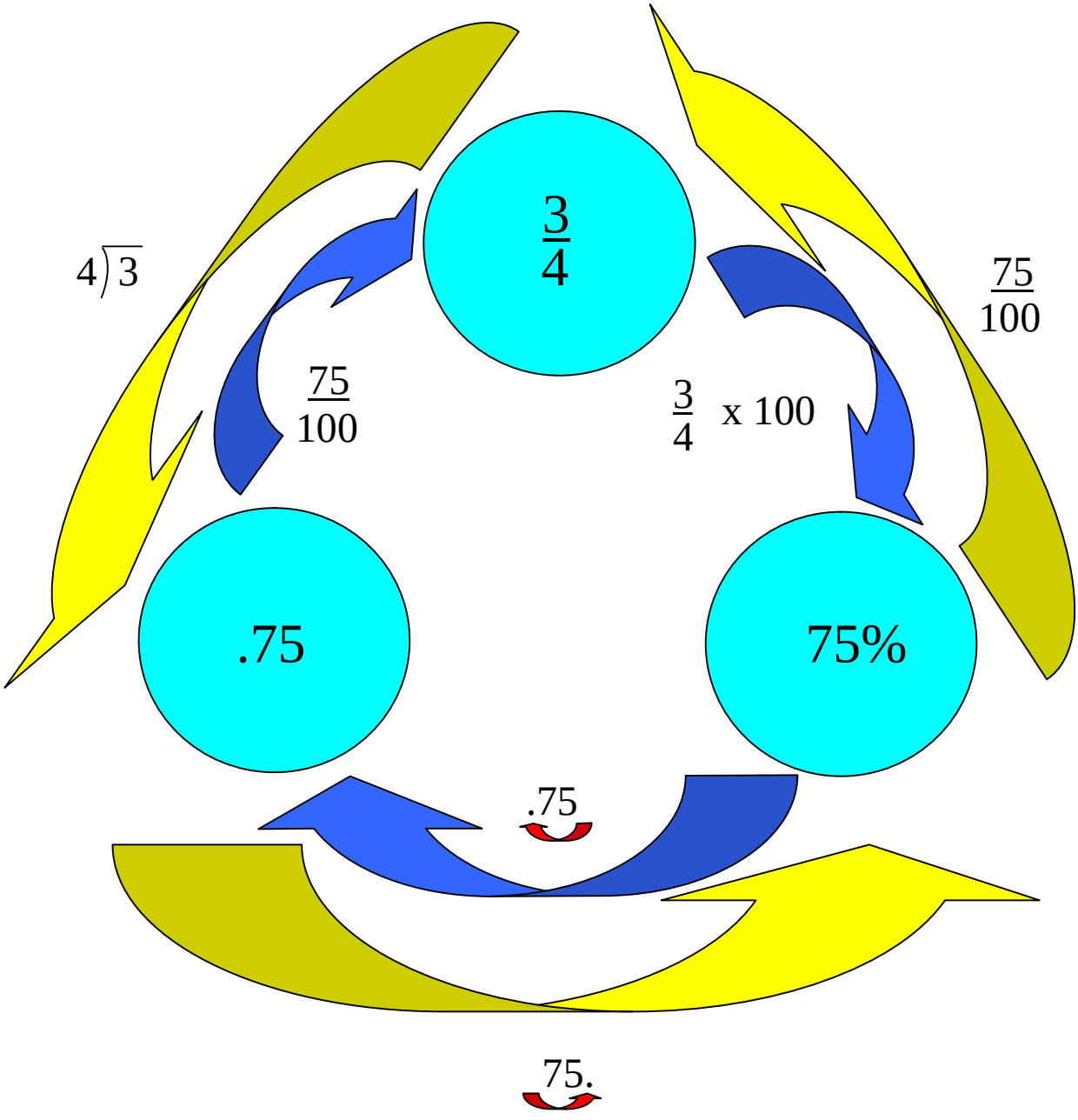
THE WHEEL OF FRACTIONS



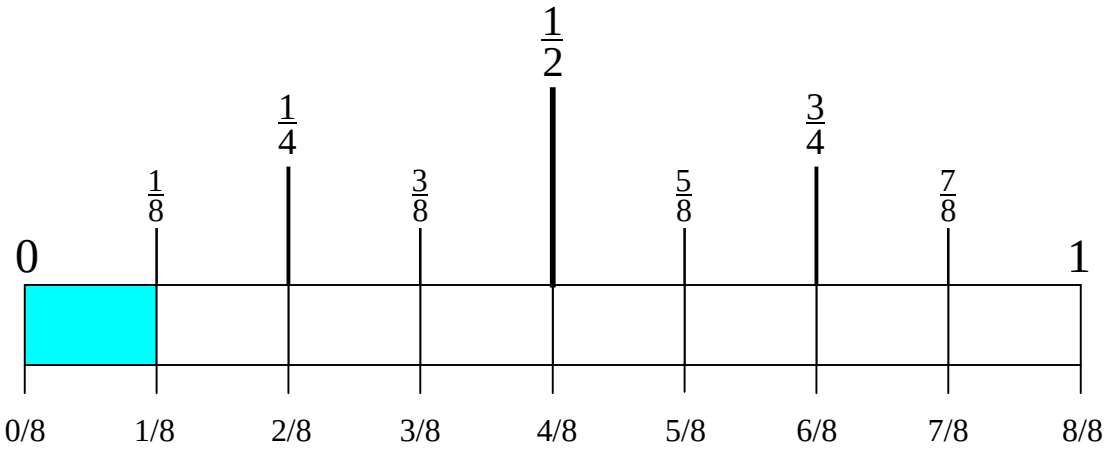


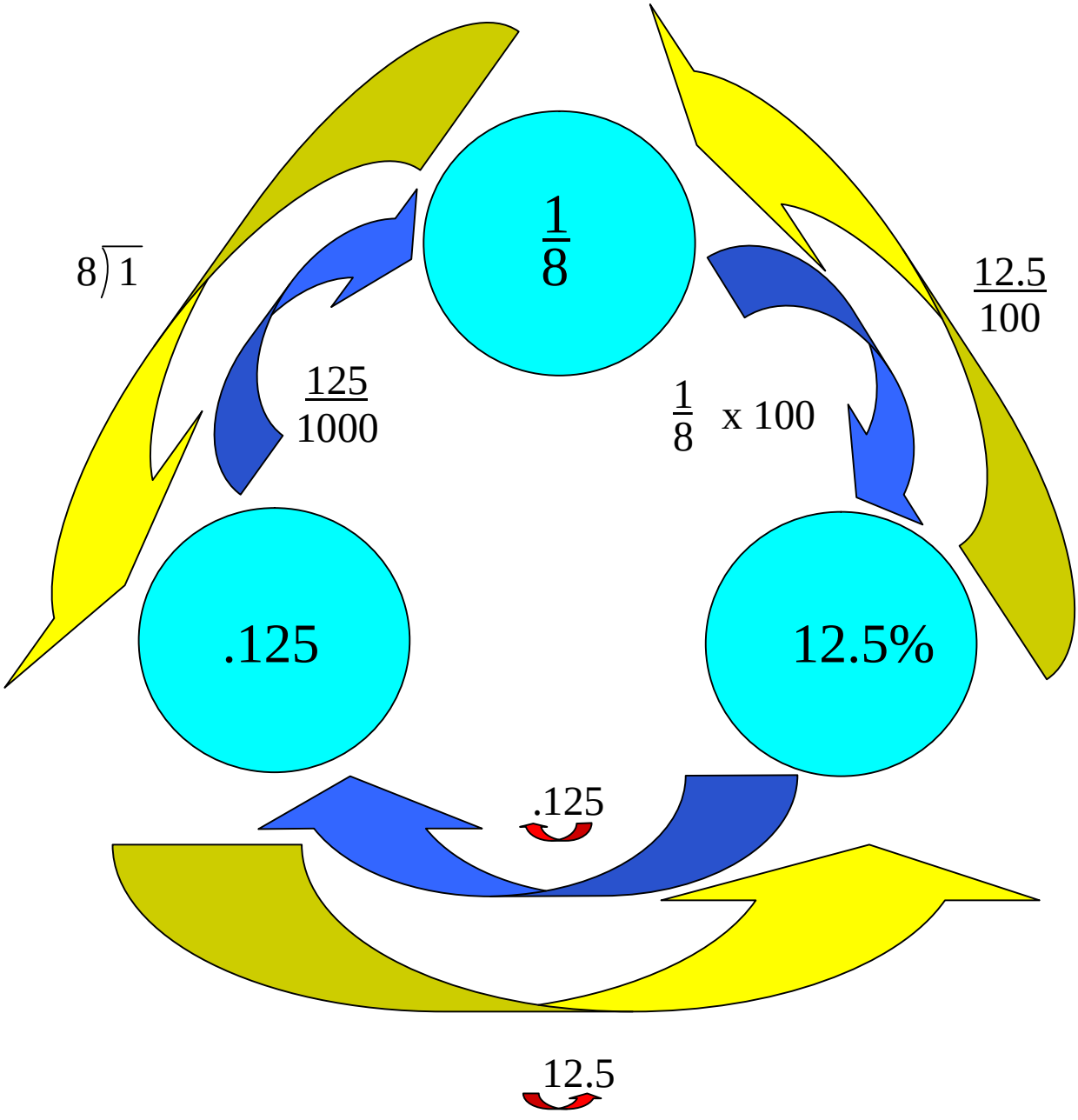
THE WHEEL OF FRACTIONS



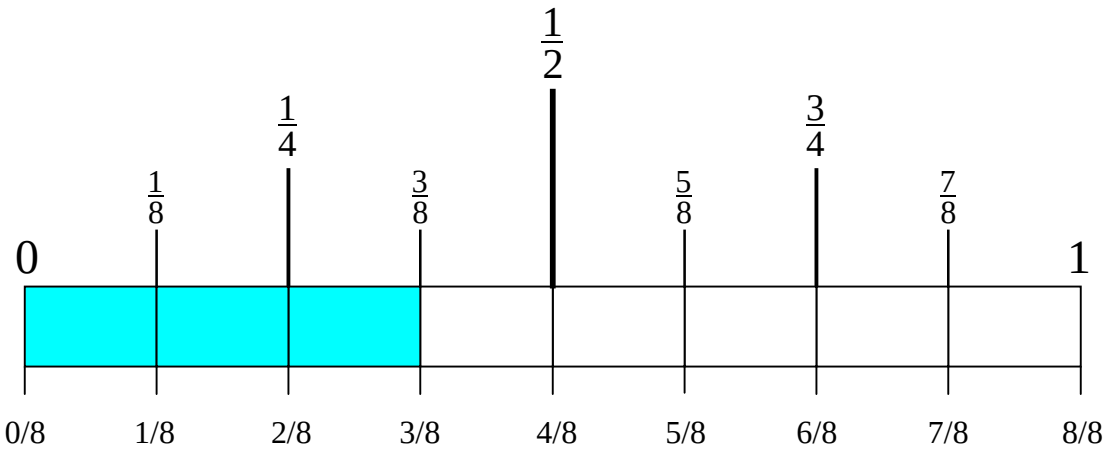


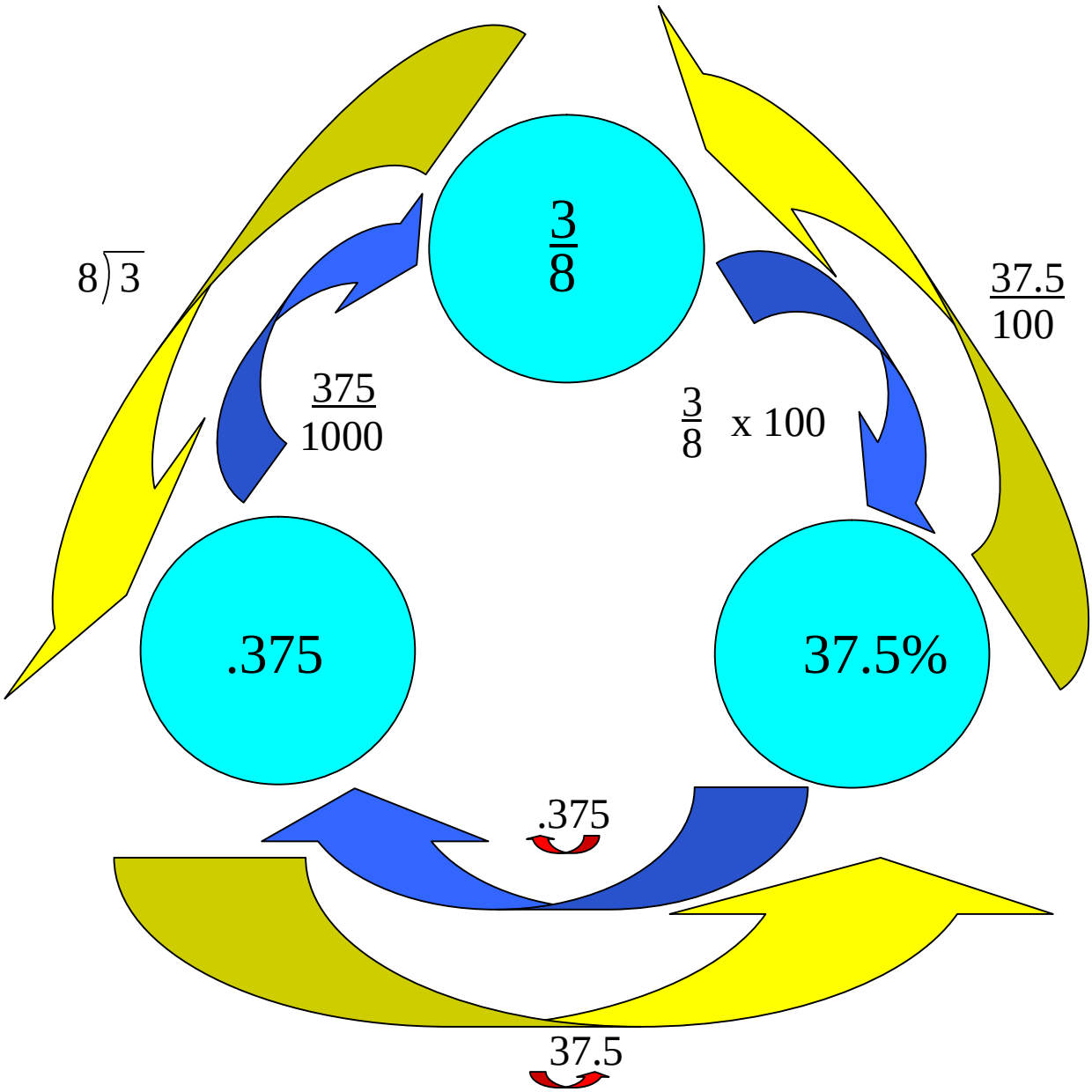
THE WHEEL OF FRACTIONS



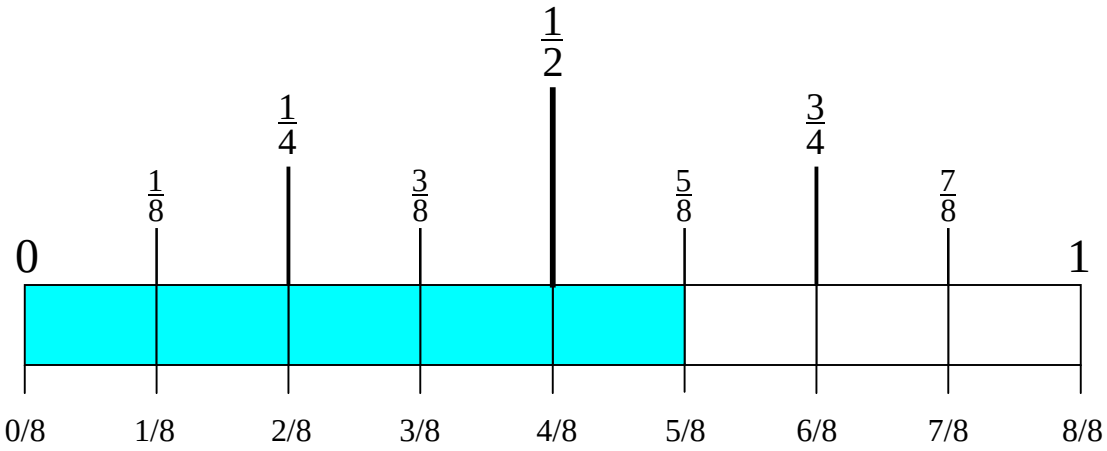


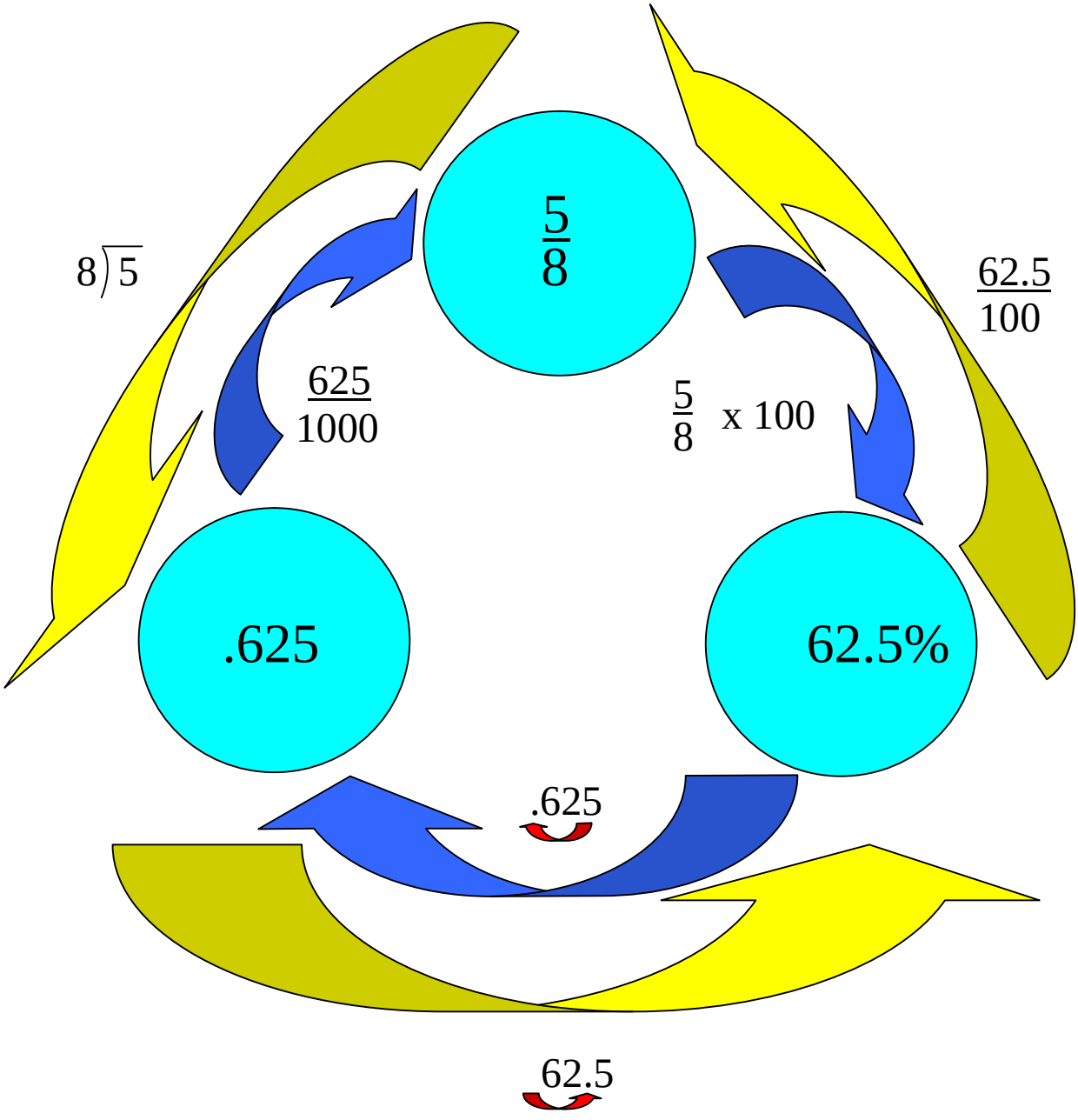
THE WHEEL OF FRACTIONS



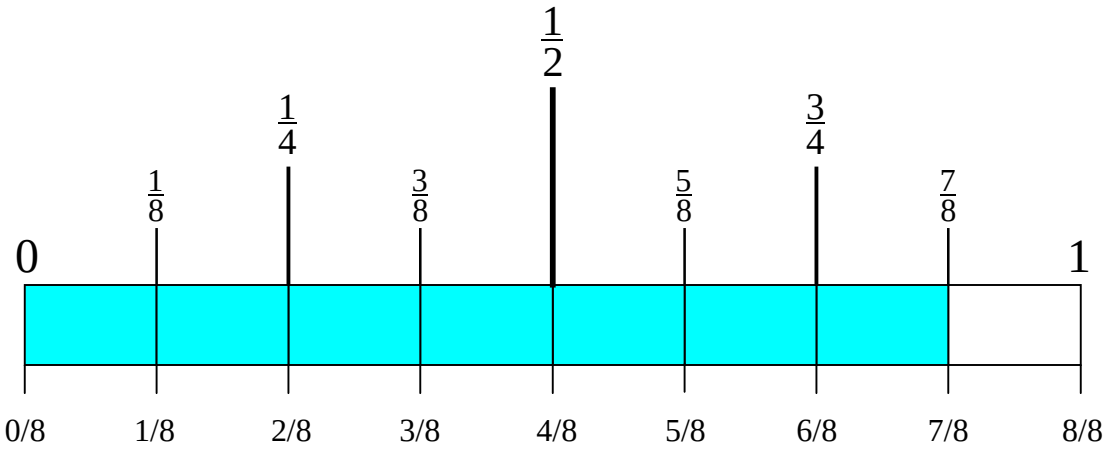


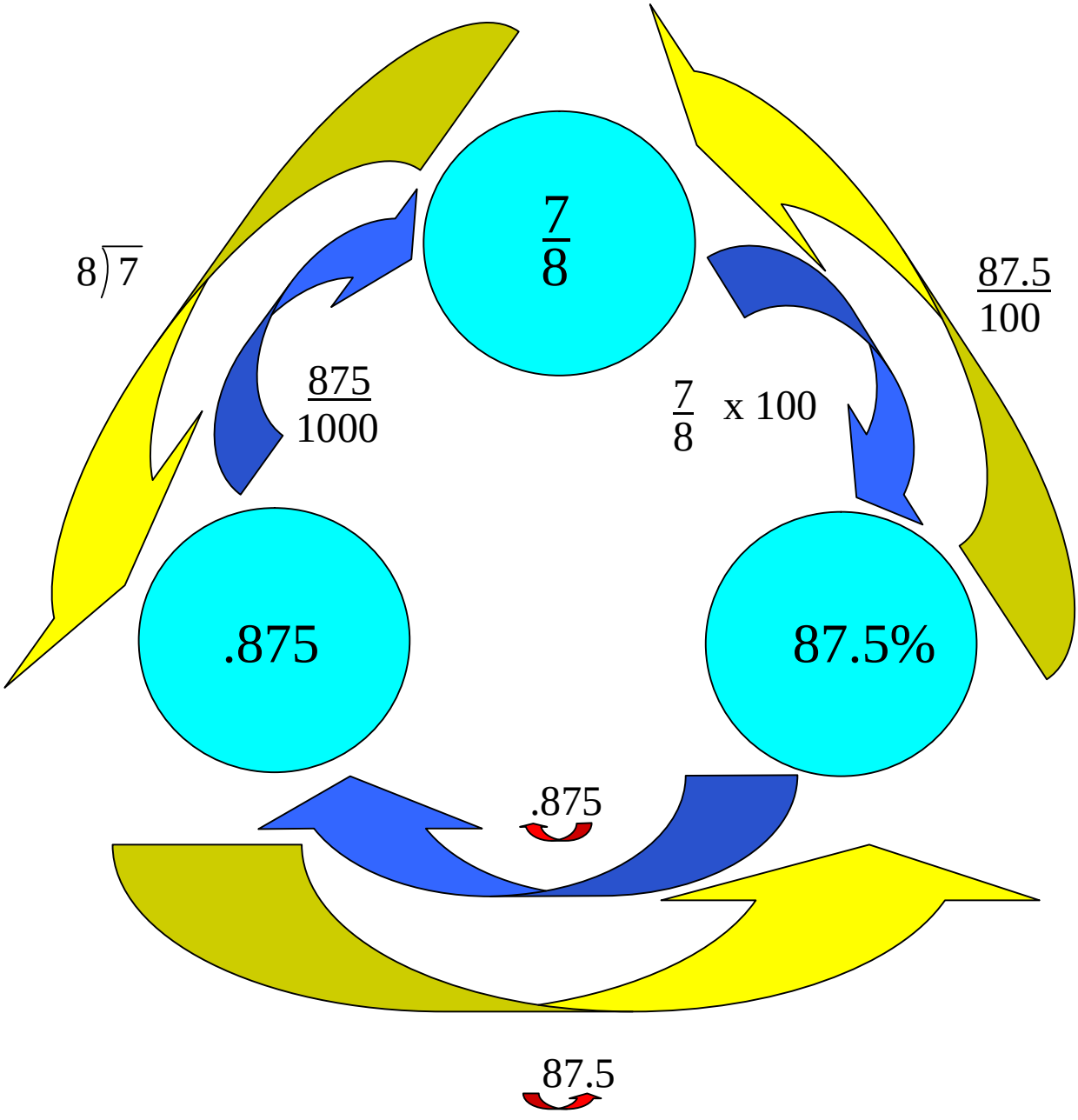
THE WHEEL OF FRACTIONS





THE WHEEL OF FRACTIONS

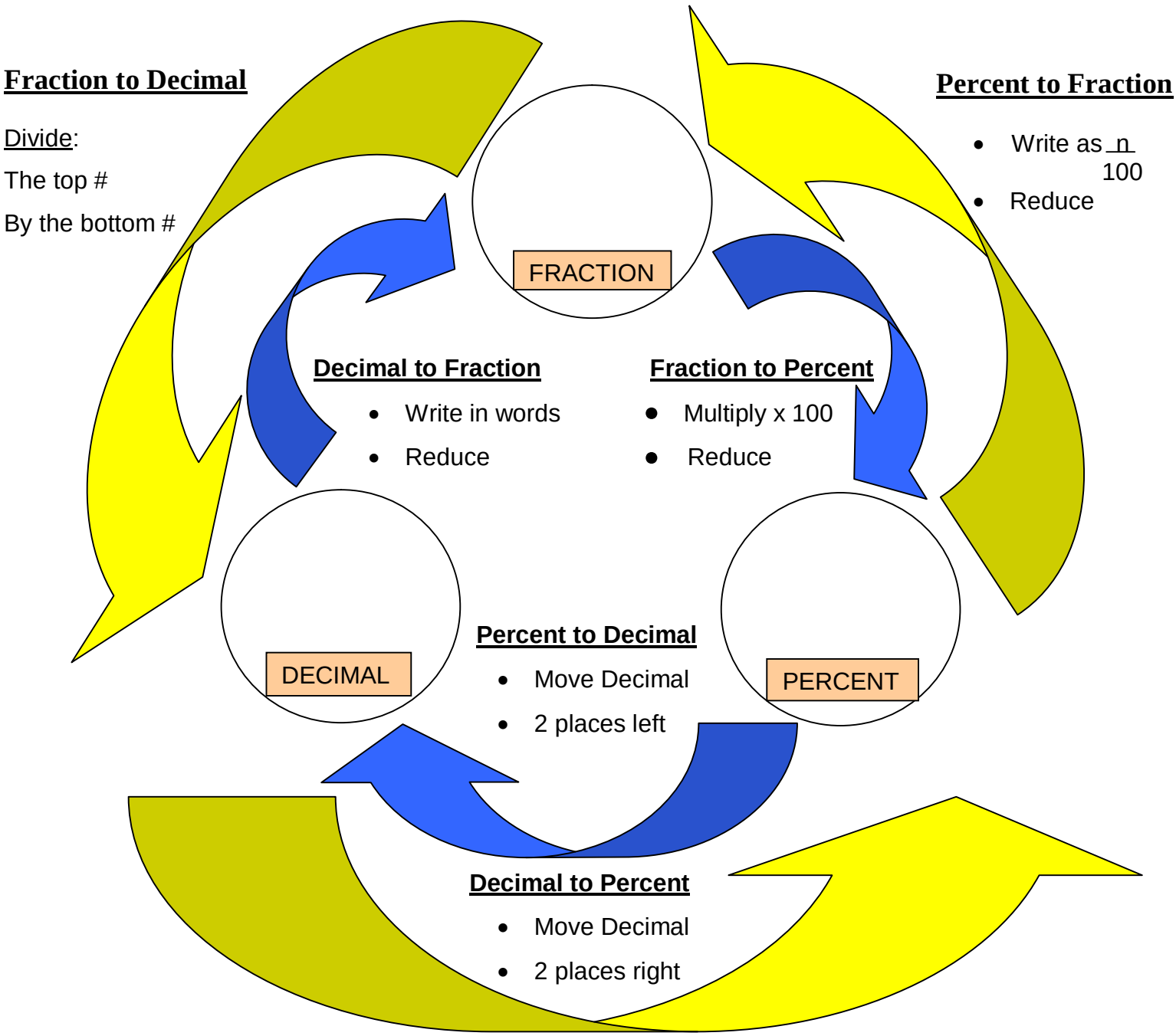




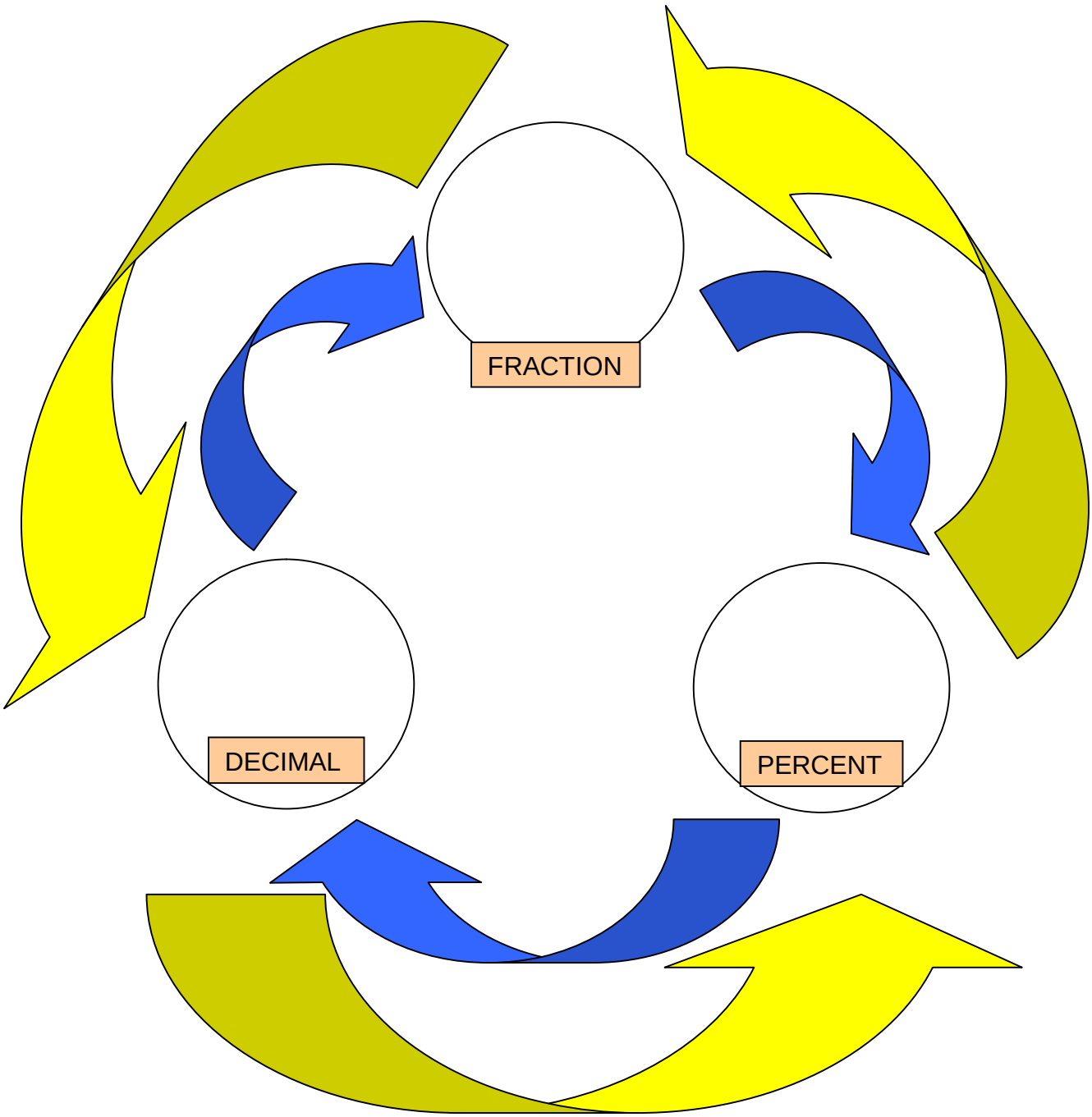
THE WHEEL OF FRACTIONS

Convert from fractions to percents, to decimals, and back to fractions.

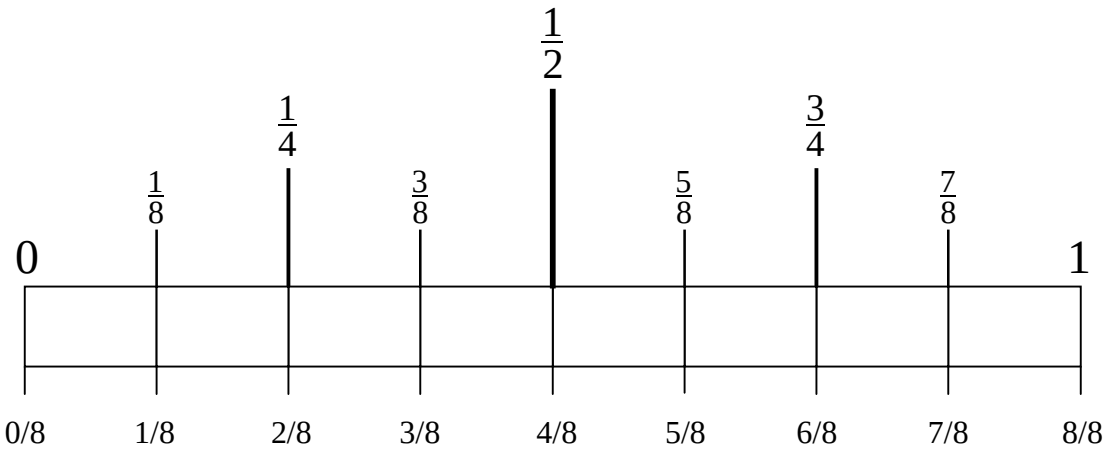
- This sheet tells how to go around "The Wheel of Fractions"

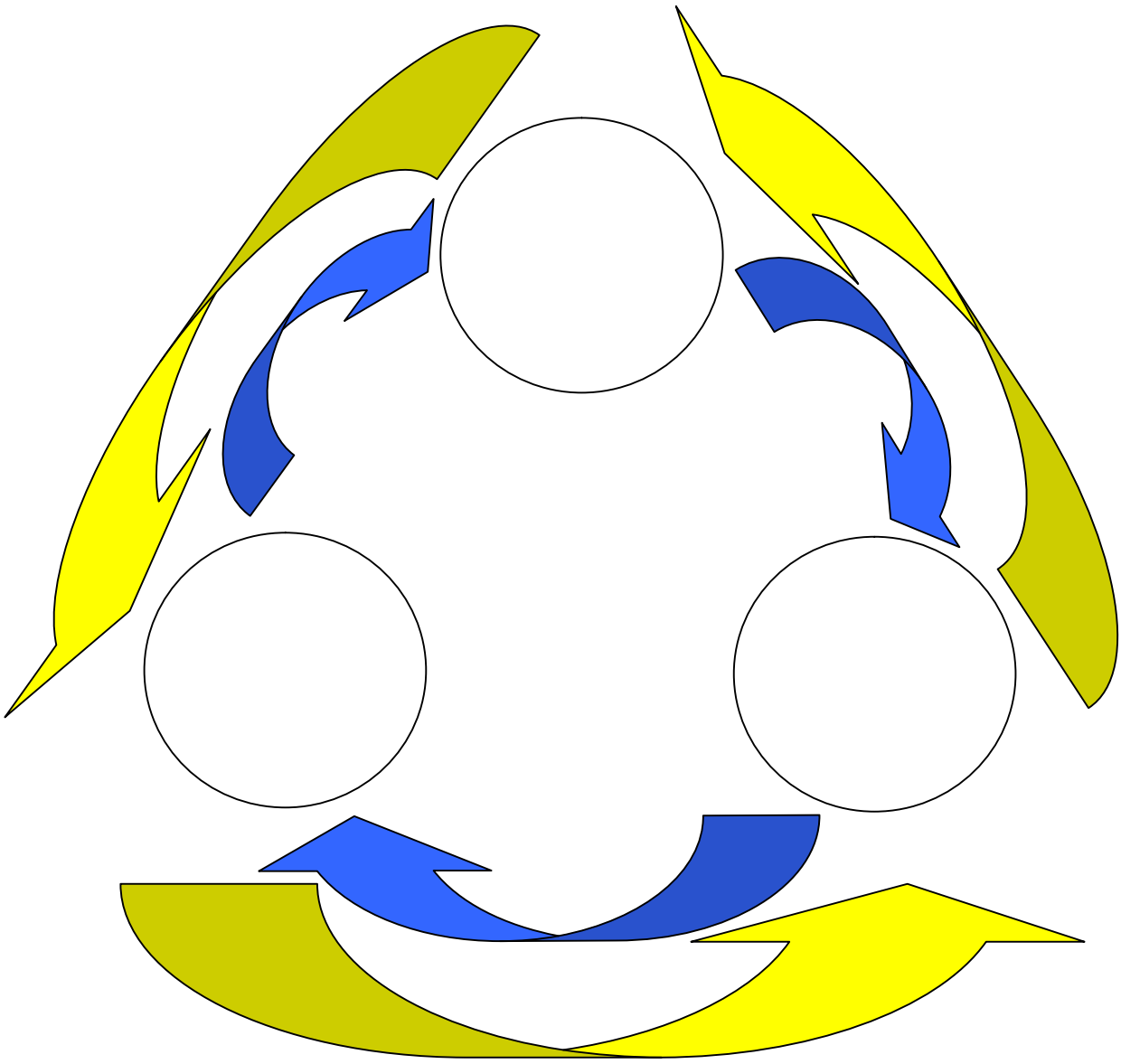


THE WHEEL OF FRACTIONS



THE WHEEL OF FRACTIONS





THE WHEEL OF FRACTIONS