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## Master Fractions, Grade 3

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**Master Fractions, Grade 3**



## Content and Instruction Extras

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## Master Fractions, Grade 3

# TABLE OF STANDARDS (PG. 1 OF 2)

The activities in this Master Fractions, Grade 3 book address the following standards.

| Where are we going? Focus Standards | | Activity |
|---|---|---|
| **(3.3)** | **Number and operations.** The student applies mathematical process standards to represent and explain fractional units. The student is expected to: | |
| **3.3A** | represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines; ***Supporting Standard*** | 1, 2, 3, 4, 5, 6, 7, 11 |
| **3.3B** | determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line; ***Supporting Standard*** | 8, 9, 11 |
| **3.3C** | explain that the unit fraction 1/*b* represents the quantity formed by one p art of a whole that has been partitioned into b equal parts where b is a non-zero whole number; ***Supporting Standard*** | 12, 13, 22 |
| **3.3D** | compose and decompose a fraction *a*/*b* with a numerator greater than zero and less than or equal to *b* as a sum of parts 1/*b*; ***Supporting Standard*** | 12, 14, 15, 16, 22 |
| **3.3E** | solve problems involving partitioning a n object or a se t of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8; ***Supporting Standard*** | 12, 17, 18, 19, 20, 22 |
| **3.3F** | represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines; ***Readiness Standard*** | 23, 24, 25, 26, 30, 32 |
| **3.3G** | explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of a same size whole for an area model; and ***Supporting Standard*** | 24, 25, 26, 27, 30, 32 |
| **3.3H** | compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models. ***Readiness Standard*** | 23, 28, 29,30, 31, 32 |
| **3.6** | **Geometry and measurement.** The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to | |
| **3.6E** | decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape. ***Supporting Standard*** | 21, 22 |
| **3.7** | **Geometry and measurement.** The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to | |
| **3.7A** | represent fractions of halves, fourths, and eighths as distances from zero on a number line. ***Supporting Standard*** | 8, 9, 10, 11 |

# TABLE OF STANDARDS (PG. 2 OF 2)

| What kind of mathematical thinking will we use? Process Standards | | Activity |
|---|---|---|
| **(3.1)** | **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: | |
| **3.1A** | apply mathematics to problems arising in everyday life, society, and the workplace; | 1, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 23, 25 |
| **3.1B** | use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution; | 1, 6, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 22, 23, 25 |
| **3.1C** | select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems; | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29, 30, 31 |
| **3.1D** | communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate; | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 24, 25, 26, 27, 30 |
| **3.1E** | create and use representations to organize, record, and communicate mathematical ideas; | 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 15, 16, 17, 18, 19, 20 |
| **3.1F** | analyze mathematical relationships to connect and communicate mathematical ideas. | 1, 8, 9, 10, 13, 14, 15, 16, 21, 24, 25, 27 |
| **3.1G** | display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication. | 1, 12, 13, 17, 18, 19, 20, 25, 26, 30 |