## Packet 3: Fraction Concepts

Dear Parents/Guardians,
Packet 3 reviews elementary fraction concepts in a more mature way in preparation for ratios and proportional reasoning in upcoming packets. Students will use fraction strips and sense-making strategies to compare and order fractions. They will review fraction concepts such as representing fractions greater than 1 as mixed numbers and improper fractions.

## Fraction Strips

In lesson 3.1 students will make fraction strips for several fractions such as halves, thirds, fourths, etc. The fraction array below is a visual tool created when fraction strips are combined in order, one under the next.

FRACTION ARRAY


Students could use this array to discover equivalent fractions (in this case, fractions that are the same distance from 0 on the number lines).
$\frac{1}{3}, \frac{2}{6}, \frac{3}{9}$, and $\frac{4}{12}$ are all equivalent fractions.
They could compare fractions and order fractions on a number line. For example, $\frac{1}{4}>\frac{1}{10}$, since $\frac{1}{4}$ is further to the right on the number line than $\frac{1}{10}$. Encourage your student to use the fraction array when comparing fractions if s/he struggles with lessons 3.1 and 3.2.


By the end of the packet, your student should know...

How to use a fraction array to explore equivalence Lesson 3.1

How to compare and order fractions using a fraction array and sense-making strategies Lessons 3.1 and 3.2

How to convert mixed numbers to improper fractions and vice versa Lesson 3.3

## Additional Resources

Resource Guide (RG) Part 1, pages 30-36

## Compare and Order Fractions

We propose five sense-making strategies for comparing and ordering fractions.

| Unit Fractions | Common Numerators | Common <br> Denominators | Close to 1 | Benchmark Fractions |
| :---: | :--- | :---: | :---: | :---: |
| A unit fraction is a <br> fraction with a <br> numerator of 1. | Same number of <br> pieces, but the size of <br> the pieces is <br> different. | Same size of pieces, <br> but the number of <br> pieces is different. | A greater proper <br> fraction has a smaller <br> fractional part "missing." | Considered one that <br> is common or easily <br> recognized. |
| $\frac{1}{100}<\frac{1}{3}$ | $\frac{5}{8}<\frac{5}{6}$ | $\frac{2}{5}<\frac{4}{5}$ | $\frac{1}{2}<\frac{99}{100}$ | $\frac{1}{2}<\frac{5}{8}$ |

