**FRACTIONS**

Subject: *Fractions as Division*  Grade: *5*

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| Common Core State Standards |
| 5.NF.3: Interpret a fraction as division of the numerator by the denominator ($\frac{a}{b}$ = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret* $\frac{3}{4}$ *as the result of dividing 3 by 4, noting that* $\frac{3}{4}$ *multiplied by 4 equals 3, and that when three wholes are shared equally among 4 people each person has a share of size* $\frac{3}{4}$ *.*  |
| Objectives |
| Students will learn to read and solve division problems as fraction-value problems. Students will demonstrate knowledge by modeling the division process.  |
| Launch Questions |
| **Q.** What does it mean to divide two numbers? How does this relate to fractions?**Q.** What are some common keywords we use to express division? Can we apply them to fractions? |
| Definition/Properties To Know |
| **Division:** (of whole numbers) splitting a number into equal parts or groups; also known as factors. |

*Warm-Up Activity:* See “WU 3”

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| Lesson (Introduction to Problem) |
| You are interning at a law firm and your boss tells you to go on a “donut run” to pick up 24 donuts for the office. You buy 6 chocolate donuts, 8 strawberry glazed donuts, 4 powdered donuts, and 6 rainbow-sprinkled donuts. **Q.** If there are 6 people in the office, including yourself, then what portion of each flavored donut will each person get? Express answers as fractions in lowest terms. **Q.** If there are 12 people in the office, including yourself, then what portion of each flavored donut will each person get? Express answers as fractions in lowest terms. **Q.** For each question above, how many donuts did you eat in total and what fraction of the total box did you eat?* For the first two questions, students will have to express each division scenario as a fraction in order to determine what portion of total flavored donuts each person will eat. Some fractions will be proper (if there are more people than donuts) and others will be improper (if there are more donuts than people).
* The last question serves as a conceptual question. If you add all the portions eaten in the first question, you will notice that every person ate a total of 4 donuts. The same goes for the second question, but with 2 donuts per person. Despite eating fractional amounts of donuts, their sum equals to the fraction formed when dividing number of donuts by number of people.
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| Materials (If Needed) |
| * Paper and Pencil
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*Main Project:* See “MP 3”

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| Closure/Expectations |
| Students should feel comfortable expressing division of whole numbers with fractions and solving for their resulting value. They should also model the scenarios/problems in order to understand the division process.  |