Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Brynn loves to bake! Today she is baking brownies and chocolate chip cookies. Yum!

The recipe for the brownies requires \_\_\_\_\_ stick of butter. The recipe for the chocolate chip cookies requires \_\_\_\_\_ stick of butter. How much butter will Brynn need today to make her brownies and chocolate chip cookies?

(1/2, 1/6) (1/3, 1/4) (3/4, 1/5)

Justify your solution with numbers, pictures, and/or words.



Brynn is going to bake her brownies first. She knows she will need \_\_\_\_\_ cup powdered sugar for her brownies. Some of the powdered sugar is needed for the batter and some is needed to sprinkle on the top after they are baked. \_\_\_\_\_ cup of powdered sugar will be used for the brownie batter. How much sugar will be used for sprinkling on the top of the brownies?

(3/8, 1/8) (9/10, 1/2) (5/12, 3/4)

Justify your solution with numbers, pictures, and/or words.

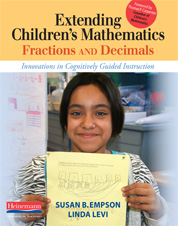


Brynn is ready to bake her delicious chocolate chip cookies. She has both milk chocolate chips and white chocolate chips in her pantry. Brynn had the notion to mix the chocolate chips together. How many different ways can she make the \_\_\_\_\_ cup of chocolate chips using both milk and white chocolate chips.

(1/2) (3/4) (5/6) (7/10)

Justify your solution with numbers, pictures, and/or words.

* What standards does this lesson address?
  + **5.NF.1** Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*
  + **5.NF.2**Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.*
  + For this lesson we are focusing only on adding and subtracting whole numbers (no mixed numbers appear until Unit 4)
* What problem types are represented in this lesson? Common Core names and CGI names are both listed (see page 88 of the Common Core Standards for these common addition and subtraction situations)
  + The problems are shown in this order:
    - Put Together/Take Apart Total Unknown – Part-Part Whole: Whole Unknown
    - Put Together/Take Apart Addend Unknown – Part-Part Whole: Part Unknown
    - Put Together/Take Apart Both Addends Unknown



* Suggested Pacing
  + Allow time for students to independently problem solve for each situation and then allow time for a class discussion of strategies and questions – focusing on teacher selected student strategies that will help move the majority of your class where you would like them to be. This could take approximately 2-3 days, but the time spent will depend completely on what your students need.
* Helpful Resources
  + Extending Children’s Mathematics: Fractions and Decimals (Susan B. Empson and Linda Levi)
    - Chapter 8 pages 179-187