You and your classmates just demonstrated fractional parts of set. The picture below represents the boys and girls in your class.

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$\frac{4}{12}$ = $\frac{1}{3} $ of the set and $\frac{8}{12 }$ = $\frac{2}{3}$ of the set.

**Now you and your partner are going to explore fractional parts of a set. Use your unifix cubes to build sets and answer the questions below.**

1. Use 18 unifix cubes. 12 are one color (We will call this color A) and 6 are the other color(we will call this color B). Link all of the unifix cubes together into one train. Keep same colors together. **Draw a picture of this train.**

Color A has how many cubes?

What fractional part of the whole is color A? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Color B has how many cubes?

What fractional part of the whole is color B? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Now take these unifix cubes and break them into 3 equal groups. Draw a picture of the cubes in the circles below. (Use colors that match your cubes if you want to)

What fractional part of the 3 groups is color A? $\frac{}{3}$

What fractional part of the 3 groups is color B? $\frac{}{3}$

1. Use the information from Part 1 and Part 2 to write equivalent fractions for color A.

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1. Now use 15 unifix cubes. 10 are one color (We will call this color A) and 5 are the other color(we will call this color B). Link all of the unifix cubes together into one train. Keep same colors together. **Draw a picture of this train below.**

What fractional part of the whole is color A?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Hint: How many out of the total are color A?)

What fractional part of the whole is color B?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Now take these unifix cubes and break them into 3 equal groups. Draw a picture of the cubes in the circles below. (Use colors that match your cubes if you want to.)
2. What fractional part of the 3 groups is color A? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(This is called the fractional part of the set)

1. What fractional part of the 3 groups is color B?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Use the information from Part 4 and Part 7 to write equivalent fractions for color B.

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**Extension**: Using 20 unifix cubes, 8 of one color and 12 of the other color. Find equivalent parts of the whole and parts of the set. Show your work and explain your thinking.