

Additional Practice**Investigation 2****Bits and Pieces II**

1. Jack and Helen are making cookies. The recipe says to combine $\frac{1}{2}$ cup of butter with $\frac{3}{4}$ cup chocolate chips and $\frac{3}{8}$ cup chopped nuts.
 - a. When these three ingredients are mixed together, how many cups of the mixture will Jack and Helen have? Show your work.

 - b. Jack and Helen decide to triple the recipe.
 - i. How many cups of butter will be needed?

 - ii. How many cups of chocolate chips will be needed?

 - iii. How many cups of chopped nuts will be needed?

 - c. When the ingredients for the tripled recipe are combined, how many cups of the mixture will Jack and Helen have?

2. Mr. Larson is planning the seating for a school recital. He needs to reserve $\frac{1}{3}$ of the seats for students and $\frac{1}{6}$ of the seats for parents.
 - a. After reserving seats for students and parents, what fraction of the seats in the auditorium are left?

 - b. Mr. Larson's principal tells him that he also needs to reserve $\frac{1}{8}$ of the seats for teachers and school officials. The remainder can be used for open seating. What fraction of the seats are now left for open seating?

 - c. Later, Mr. Larson's principal says he should reserve $\frac{1}{4}$ of the seats for students from other middle schools. Are there enough seats left? If not, explain why not; otherwise, state what fraction of the seats will be available for open seating.

Additional Practice *(continued)*

Investigation 2

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3. Find the value of N that makes each number sentence correct.

a. $\frac{3}{4} + N = \frac{19}{20}$

b. $N - \frac{1}{2} = \frac{3}{8}$

c. $\frac{1}{6} + \frac{5}{12} = N$

d. $N - \frac{1}{5} = \frac{7}{20}$

e. $\frac{7}{9} - \frac{2}{3} = N$

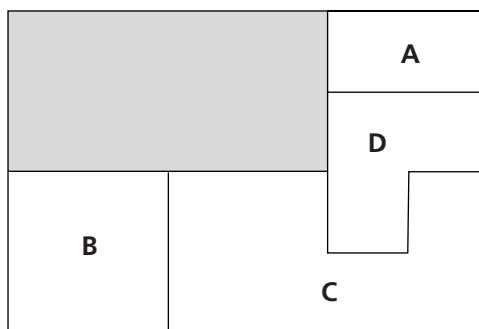
f. $\frac{3}{2} + N = \frac{9}{4}$

g. $\frac{4}{5} + \frac{1}{6} = N$

h. $\frac{1}{2} - N = \frac{1}{5}$

i. $\frac{3}{7} + \frac{4}{21} = N$

4. The shaded region represents one whole unit.



a. What fraction of the whole is each of the other four regions A, B, C, D?

b. Based on your answers to part (a), find the area of each of the following:

i. region A + region B

ii. region C + region D

iii. region B – region D

iv. region C – region A

c. If the entire outer rectangle is considered the whole, what fraction of the whole would the shaded gray area be? Explain your reasoning.

5. Find each sum. Describe any patterns you see.

a. $\frac{1}{2} + \frac{1}{3}$

b. $\frac{1}{3} + \frac{1}{4}$

c. $\frac{1}{4} + \frac{1}{5}$

d. $\frac{1}{5} + \frac{1}{6}$

e. $\frac{1}{6} + \frac{1}{7}$

f. $\frac{1}{7} + \frac{1}{8}$