

Addition Grids

Your Challenge

For the addition grid below, the sum of each row and column is shown in a gray box. Fill in the missing numbers to complete the grid.

$\frac{3}{4}$	$1\frac{1}{12}$	$\frac{2}{12}$	2
$\frac{1}{3}$	$1\frac{1}{20}$	$\frac{7}{10}$	$2\frac{1}{12}$
$\frac{3}{12}$	$\frac{1}{6}$	$\frac{2}{15}$	$\frac{11}{20}$
$1\frac{4}{12}$	$2\frac{3}{10}$	1	



Addition Grids *continued*

Make your own addition grid by filling in all the squares in the grid below. Make sure the total of each row and column is shown in the gray boxes. This grid will be your answer key. Then, draw a blank grid on another sheet of paper. How many squares do you need to fill in so someone else can solve it? Share your puzzle with a friend. **Answers will vary. Possible answers shown. Check students' work. Responses should show an understanding of addition with fractions and mixed numbers.**

$2\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{4}$	$3\frac{3}{4}$
$\frac{3}{4}$	$1\frac{3}{10}$	$\frac{1}{2}$	$2\frac{11}{20}$
$\frac{3}{4}$	$1\frac{3}{4}$	$\frac{3}{4}$	$3\frac{1}{4}$
4	$3\frac{11}{20}$	2	



Race Training**Your Challenge**

You are training for a running race. Solve the following problems about your training. Show your work on the **Recording Sheet**.

1. You want to run $15\frac{1}{4}$ miles this week. You never run fewer than $1\frac{1}{4}$ miles or more than 3 miles in a day, and you don't want to repeat the same mileage more than twice. What could be a possible training schedule for the week?
2. You are on a $5\frac{1}{2}$ -mile run. You stop to tie your shoe after $1\frac{3}{4}$ miles. A little later, you stop again to drink some water and notice you have fewer than 2 miles left to run. How many miles had you run when you stopped for water? How many miles do you have left to run? Consider five possible combinations.



Race Training
1. Answers will vary. Possible student work:

Day	Number of Miles
Monday	$1\frac{1}{2}$ mi.
Tuesday	$1\frac{3}{4}$ mi
Wednesday	$2\frac{1}{2}$ mi
Thursday	$2\frac{1}{2}$ mi
Friday	$2\frac{3}{4}$ mi
Saturday	3 mi
Sunday	$1\frac{1}{4}$ mi

$$1\frac{1}{2} + 1\frac{3}{4} + 2\frac{1}{2} + 2\frac{1}{2} + 2\frac{3}{4} + 3 + 1\frac{1}{4} = 15\frac{1}{4} \text{ miles}$$

2. Answers will vary. Possible solutions shown.

$3\frac{3}{4}$ miles in; $1\frac{3}{4}$ miles left

4 miles in; $1\frac{1}{2}$ miles left

$4\frac{1}{2}$ miles in; 1 mile left

$4\frac{3}{4}$ miles in; $\frac{3}{4}$ mile left

5 miles in; $\frac{1}{2}$ mile left



Baking Cookies

Your Challenge

You need $2\frac{1}{2}$ sticks of butter to make cookies. You only have the following leftover sticks of butter:

$\frac{3}{4}$ stick	$\frac{5}{8}$ stick	$\frac{1}{3}$ stick	$1\frac{2}{3}$ sticks	$\frac{1}{2}$ stick
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Answer the following questions. Show your work on the **Recording Sheet**.

1. What pieces of butter could you use to get the $2\frac{1}{2}$ sticks you need for the cookies? How much butter will be left over from the sticks you use?
2. You make a different kind of cookie with the butter you did not use. This recipe uses $\frac{1}{4}$ stick of butter for each batch. How many batches of cookies can you make with the butter that is left?



Baking Cookies

- 1. Answers will vary. Possible answer shown.**

$$\frac{3}{4} + 1\frac{2}{3} + \frac{1}{2} = 2\frac{11}{12}$$

$$2\frac{11}{12} - 2\frac{1}{2} = \frac{5}{12}$$

$\frac{5}{12}$ stick of butter left over

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- 2. Answers will vary depending on the answer to problem 1.**

Possible solution:

$$\frac{1}{3} + \frac{5}{8} = \frac{23}{24} \text{ stick of butter left}$$

$\frac{5}{12}$ left over from problem 1 is almost $\frac{1}{2}$ of a stick, so I have almost $1\frac{1}{2}$ sticks of butter total.

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1\frac{1}{4}$$

I can make 5 batches of cookies.

