

PROBLEM	COMMENTS										
<p>Find the sum or difference.</p> $\frac{3}{7} + \frac{7}{21} = \frac{9}{21} + \frac{7}{21} = \frac{16}{21}$ $\frac{8}{15} - \frac{3}{6} = \frac{16}{30} - \frac{15}{30} = \frac{1}{30}$	<p>Later in the unit, students will need to draw upon their understanding of factors and multiples, as well as of equivalent fractions, to add and subtract fractions with unlike denominators. In both examples here, students first need to determine a common denominator so that they can add or subtract the pair of fractions.</p>										
<p>Use a ratio table to multiply the numbers.</p> $45 \times 44 = \underline{1,980}$ <table><tr><td>1</td><td>2</td><td>4</td><td>40</td><td>44</td></tr><tr><td>45</td><td>90</td><td>180</td><td>1,800</td><td>1,980</td></tr></table>	1	2	4	40	44	45	90	180	1,800	1,980	<p>Students continue to practice multiplying multi-digit numbers. In this example, they use a ratio table to use known facts to calculate first the partial products (45×4 and 45×40) and then the final product, which is the sum of those partial products ($45 \times 44 = 45 \times 4 + 45 \times 40$).</p>
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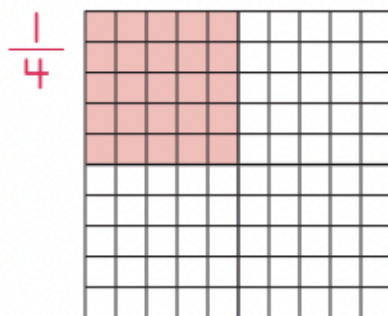
FREQUENTLY ASKED QUESTIONS ABOUT UNIT 2

Q: Why do so many of the fraction problems use time and money?

A: Any fraction with a denominator that is a factor of 60 (2, 3, 4, 5, 6, 10, 12, 15, 20, 30) can be represented as part of the 60 minutes in a whole hour. Any fraction with a denominator that is a factor of 100 (2, 4, 5, 10, 20, 25, 50) can be represented as part of the 100 cents in a whole dollar. This makes a clock face and a whole dollar versatile models for a variety of fractions.



When students represent $\frac{2}{3}$ as part of a whole hour, they can see that it is also equal to $\frac{8}{12}$, $\frac{40}{60}$, and $\frac{4}{6}$.



When students represent $\frac{1}{4}$ as part of a whole dollar (100 cents in the whole square grid), they can see that it is equal to $\frac{25}{100}$.

The contexts of time and money are natural ways to ease students into thinking about adding and subtracting fractions with like and unlike denominators. When students represent each fraction as part of a whole hour or dollar, they are using the model to convert the original fractions into equivalent fractions that have a common denominator, as in the second example on the previous page.