

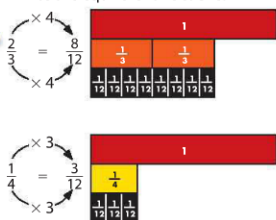


Why do you need a common denominator to subtract fractions?

[Sample response: You need to subtract same-size parts. If the denominators are different, you do not know how much to take away.]

Step 2

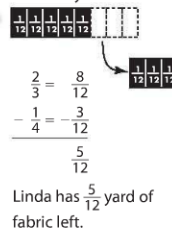
Write the equivalent fractions.



Why do you multiply the numerator and the denominator by the same number when writing equivalent fractions? [This is the same as multiplying the fraction by 1.]

Step 3

Subtract. Simplify if necessary.



How is subtracting fractions with unlike denominators similar to adding fractions with unlike denominators?

[In both cases you find a common denominator and write equivalent fractions.]

Step 1

Change the fractions to equivalent fractions with a common denominator.

Find the LCM of the denominators

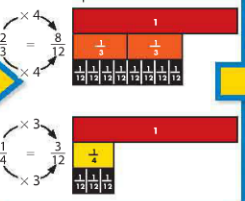
Multiples of 3: 3, 6, 9, 12, ...

Multiples of 4: 4, 8, 12, ...

The LCM is 12, so the LCD is 12.

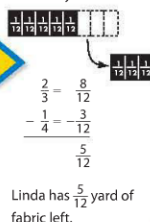
Step 2

Write the equivalent fractions.



Step 3

Subtract. Simplify if necessary.



Problem Solving

Exercise	Content
25	Read a Ruler Subtracting Fractions $\left(\frac{13}{16} - \frac{1}{4}\right)$
26	Perimeter $\left(\frac{1}{2} + \frac{7}{8} + \frac{13}{16}\right)$
27	Subtracting Fractions $\left(\frac{3}{4} - \frac{1}{2}\right)$
28	Subtracting Fractions $\left(\frac{5}{6} - \frac{3}{12}\right)$
29	Estimation $(70 + 60 + 40)$
30	Multiple Step $\left[4\frac{1}{4} - \left(\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}\right)\right]$
31	Communicate Math Understanding Common Denominators
32	Equations
33	Common Multiples

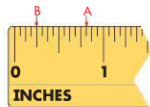
Students use underlying processes and mathematical tools for Exercises 25–33. Remind students to check for reasonableness when solving each problem.

Exercise 32

Test-Taking Tip: Understand the Question Encourage students to turn the question into a statement. *We need to find out how much added to \$300 would be a total of \$800.*

Early Finishers In Exercise 30, how many hours does LaDonna exercise in four weeks? [17 hours]

25. Write a number sentence to name the difference between Point A and Point B.



$$\frac{13}{16} - \frac{1}{4} = \frac{9}{16}$$

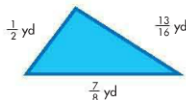
27. When Mr. Goldman left on a business trip, his car had $\frac{3}{4}$ of a tank of gas. At the first rest stop, there was only $\frac{1}{2}$ tank left. How much gas had the car used? $\frac{1}{4}$ tank

29. **Estimation** Roy earned \$72.50, \$59, and \$41.75 in tips when waiting tables last weekend. About how much did Roy earn in tips?
About \$170

31. **Writing to Explain** Why do fractions need to have a common denominator before you add or subtract them?
See margin.

33. **Number Sense** What is the greatest common multiple of 3 and 4?
See margin.

26. **Geometry** Find the perimeter of the figure below.



$$2\frac{3}{16} \text{ yards}$$

28. Mariko's social studies class lasts $\frac{5}{6}$ of an hour. Only $\frac{3}{12}$ of an hour has gone by. What fraction of an hour remains of Mariko's social studies class? $\frac{7}{12}$ hour

30. Nate exercises $\frac{1}{2}$ hour every day. LaDonna exercises $4\frac{1}{4}$ hours each week. Who exercises more in one week? How much more?
LaDonna; Nate exercises $3\frac{1}{2}$ hr each week; $\frac{3}{4}$ hour

32. **Algebra** Jay saved \$300 to buy a new laptop computer. The computer costs \$800. Which equation shows how to find the amount Jay still needs to save?

- A $300 - n = 800$ C $n - 300 = 800$
 B $800 + 300 = n$ D $n + 300 = 800$

31. The denominator is like a label. It tells you what size parts you are adding or subtracting. The parts must be the same size when you add or subtract.

33. There is no greatest common multiple because the set of whole numbers goes forever.