



# Subtract Fractions Flexibly

Let's find all kinds of differences.

## Warm-up

### Which Three Go Together: Fractional Values

Which 3 go together?

A.  $2 - \frac{3}{5}$

B.  $\frac{10}{5} - \frac{3}{5}$

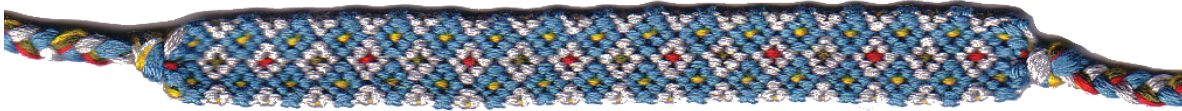
C.  $1\frac{3}{5} - \frac{1}{5}$

D.  $\frac{10}{5} - 1$



## Activity 1

### Friendship Bracelets



Clare, Elena, and Andre make *macramé* (MAA-kruh-may) friendship bracelets. They'd like their bracelets to be  $9\frac{4}{8}$  inches long. For each question, explain or show your reasoning.

1. Clare starts her bracelet first and has only  $\frac{7}{8}$  inch left until she finishes it. How long is her bracelet so far?
2. So far, Elena's bracelet is  $5\frac{1}{8}$  inches long and Andre's is  $3\frac{5}{8}$  inches long. How many more inches do they each need to reach  $9\frac{4}{8}$  inches?
3. How much longer is Elena's bracelet than Andre's bracelet?

## Activity 2

### Multiple Ways to Subtract

Here are 4 expressions that you may have written about the friendship bracelets.

$$9\frac{4}{8} - \frac{7}{8}$$

$$9\frac{4}{8} - 5\frac{1}{8}$$

$$9\frac{4}{8} - 3\frac{5}{8}$$

$$5\frac{1}{8} - 3\frac{5}{8}$$

- Here is one way to find the value of the first expression. Look closely at the calculation. Talk to your partner about why  $9\frac{4}{8}$  is written as different sums.

$9\frac{4}{8} - \frac{7}{8}$	
first number	second number
$9\frac{4}{8}$ $8 + 1 + \frac{4}{8}$ $8 + \frac{8}{8} + \frac{4}{8}$ $8 + \frac{12}{8}$	$\frac{7}{8}$
$8 + \frac{12}{8} - \frac{7}{8}$ $8 + \frac{5}{8}$ $8\frac{5}{8}$	

2. Here are some unfinished calculations. Complete them to find the value of each difference.

**a**

$9\frac{4}{8} - 5\frac{1}{8}$	
first number	second number
$9\frac{4}{8}$ $9 + \frac{4}{8}$	$5\frac{1}{8}$ $5 + \frac{1}{8}$

**b**

$9\frac{4}{8} - 3\frac{5}{8}$	
first number	second number
$9\frac{4}{8}$ $8 + 1 + \frac{4}{8}$ $8 + \frac{8}{8} + \frac{4}{8}$ $8 + \frac{12}{8}$	$3\frac{5}{8}$ $3 + \frac{5}{8}$

**c**

$5\frac{1}{8} - 3\frac{5}{8}$	
first number	second number
$5\frac{1}{8}$ $5 + \frac{1}{8}$	$3\frac{5}{8}$ $3 + \frac{5}{8}$