



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

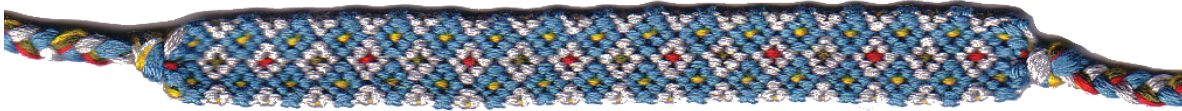
C. $1\frac{3}{5} - \frac{1}{5}$

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 |
| $5\frac{1}{8}$ $5 + \frac{1}{8}$ | $3\frac{5}{8}$ $3 + \frac{5}{8}$ |