

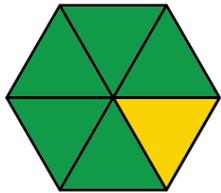
# Activity 20 Assessment

## Adding Fractions and Mixed Numbers

### Adding Fractions and Mixed Numbers

Models addition of fractions or mixed numbers with like denominators

$$\frac{3}{6} + \frac{2}{6}$$



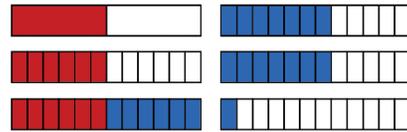
I used pattern blocks. A triangle is  $\frac{1}{6}$ .

So,  $3 + 2 = 5$  triangles make  $\frac{5}{6}$ .

$$\text{So, } \frac{3}{6} + \frac{2}{6} = \frac{5}{6}.$$

Models addition of fractions or mixed numbers with unlike denominators

$$1\frac{1}{2} + \frac{7}{12}$$



I divided one rectangle into 2 equal pieces and another rectangle into 12 equal pieces. I shaded 1 part of the first rectangle and 7 parts of the second rectangle. I needed the sizes of the pieces to be the same, so I divided the 2 parts of the first rectangle into 6 parts each; altogether this made 12 parts. This showed 6 of 12 parts and 7 of 12 parts being shaded. Altogether, this combined to 13 parts. There are 12 parts in one whole, so the answer is  $1\frac{1}{12}$ .

Uses equivalent fractions to add fractions or mixed numbers

$$1\frac{1}{2} + \frac{7}{6}$$

$$1\frac{1}{2} + \frac{7}{6} = \frac{3}{2} + \frac{7}{6}$$

$$= \frac{9}{6} + \frac{7}{6}$$

$$= \frac{16}{6}$$

$$= 2\frac{4}{6}$$

$$= 2\frac{2}{3}$$

Solves a problem involving the addition of fractions or mixed numbers

A student studied  $1\frac{3}{4}$  h for a math test and  $1\frac{2}{3}$  h for a science test.

How long did the student study in total?

$$1\frac{3}{4} + 1\frac{2}{3} = (1 + 1) + (\frac{3}{4} + \frac{2}{3})$$

$$= (1 + 1) + (\frac{9}{12} + \frac{8}{12})$$

$$= 2 + \frac{17}{12}$$

$$= 2 + 1 + \frac{5}{12}$$

$$= 3 + \frac{5}{12}$$

The student studied for  $3\frac{5}{12}$  h.

### Observations/Documentation