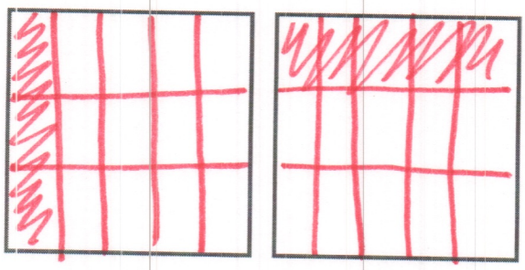
Name: KEY

G5 U3 Lesson 8 - Let's Try It

Consider the expression $\frac{1}{5} + \frac{1}{3}$.

1. Model each addend.



2. Partition each area model to show like units. What unit do you have now? fifteenths

3. Show how you can use multiplication to rewrite $\frac{1}{5}$ with like units.

$$\frac{1}{5} = \frac{1 \times 3}{5 \times 3} = \frac{3}{15}$$

4. Show how you can use multiplication to rewrite $\frac{1}{3}$ with like units.

$$\frac{1}{3} = \frac{1 \times 5}{3 \times 5} = \frac{5}{15}$$

5. How is the multiplication you did in #3 and #4 related to the area model you drew?

I cut the fifths into 3 times as many pieces. I cut the thirds into 5 times as many pieces.

6. Determine the sum. $\frac{3}{15} + \frac{5}{15} = \frac{8}{15}$

7. List at least two other common multiples of 3 and 5 that can be used to find like units.

30, 45, 60, 75, 90... (any multiples of 15)

8. Use multiplication and one of the common multiples to add $\frac{1}{5} + \frac{1}{3}$ a different way.

$\frac{1}{3} \times \frac{10}{10} = \frac{10}{30}$ $\frac{1}{5} \times \frac{6}{6} = \frac{6}{30}$ $\frac{10}{30} + \frac{6}{30} = \frac{16}{30}$

9. Is the sum from Question #8 equivalent to the sum from Question #6? Explain.

Yes, $\frac{16}{30}$ is equivalent to $\frac{8}{15}$. The products are equivalent, but the pieces are partitioned differently.

Consider the expression $\frac{3}{4} + \frac{1}{3}$.

10. List at least two common multiples you can use to make like units.

12, 24, 36, 48... (any multiple of 12)

11. Use multiplication to write the expression using equivalent fractions with like units.

$\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$ $\frac{1 \times 4}{3 \times 4} = \frac{4}{12}$

$\frac{9}{12} + \frac{4}{12} = \frac{13}{12}$ OR $1\frac{1}{12}$

12. What is the sum as a fraction greater than 1? As a mixed number?

Consider the expression $\frac{2}{9} + \frac{1}{6}$.

13. Kyle wants to use the common multiple 18 to make like units. Trevor wants to use the common multiple 54 to make like units. Who do you agree with and why?

Either student is correct. I prefer Kyle's way because I think 18 is a little easier to think about.

Name: KEY

G5 U3 Lesson 8 - Independent Work

1. Make like units. Then add.

$\frac{1}{3} + \frac{7}{9}$

$\frac{1 \times 3}{3 \times 3} = \frac{3}{9}$

$\frac{3}{9} + \frac{7}{9}$

$\frac{10}{9}$ OR $1\frac{1}{9}$

$\frac{11}{8} + \frac{3}{4}$

$\frac{3 \times 2}{4 \times 2} = \frac{6}{8}$

$\frac{11}{8} + \frac{6}{8} = \frac{17}{8}$ OR $2\frac{1}{8}$

2. Make like units. Then add.

$\frac{2}{3} + \frac{7}{11}$

$\frac{2 \times 11}{3 \times 11} = \frac{22}{33}$

$\frac{7 \times 3}{11 \times 3} = \frac{21}{33}$

$\frac{22}{33} + \frac{21}{33} = \frac{43}{33}$ OR $1\frac{10}{33}$

$\frac{5}{6} + \frac{3}{4}$

$\frac{5 \times 2}{6 \times 2} = \frac{10}{12}$

$\frac{3 \times 3}{4 \times 3} = \frac{9}{12}$

$\frac{10}{12} + \frac{9}{12} = \frac{19}{12}$ OR $1\frac{7}{12}$

3. **Make like units. Then add.**

$1\frac{1}{10} + \frac{1}{4}$

$1\frac{1}{10} \times \frac{2}{2} = 1\frac{2}{20}$

$\frac{1}{4} \times \frac{5}{5} = \frac{5}{20}$

$1\frac{2}{20} + \frac{5}{20}$

$1\frac{7}{20}$

$\frac{2}{7} + 1\frac{1}{5}$

$\frac{2}{7} \times \frac{5}{5} = \frac{10}{35}$

$1\frac{1}{5} \times \frac{7}{7} = 1\frac{7}{35}$

$\frac{10}{35} + 1\frac{7}{35}$

$1\frac{17}{35}$

4. **The two students below tried to solve the same problem. Look at their work. Who is correct? How do you know?**

BRAD

$\frac{1}{6} + \frac{1}{4} = ?$

$\frac{2}{12} + \frac{3}{12} = \frac{5}{12}$

AMBER

$\frac{1}{6} + \frac{1}{4} = ?$

$\frac{4}{24} + \frac{6}{24} = \frac{10}{24}$

They are both correct. They just used a different like unit. Brad used twelfths and Amber used 24ths. The sums are equivalent.