Name: Key **#** _____ **Date:** _____

Extra Practice: Equivalent Fractions, Equivalent Expressions, and Models
## Module 3: Mid-Module

5.NF.1: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

5.NF.2: Solve contextual problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

1. Gracen studied for 1 half of an hour, and Addison studied for 4 sevenths of an hour. Write an equation that can be used to find how much longer Addison studied than Gracen? Draw a model to show your thinking.
5.NF.2

$$\frac{4\times2}{7\times2} - \frac{1\times7}{2\times7} = \frac{8}{14} - \frac{7}{14} = \frac{1}{14}$$

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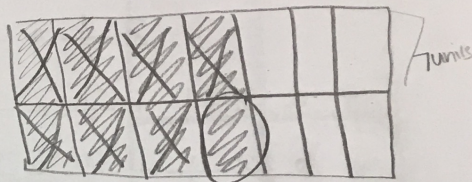
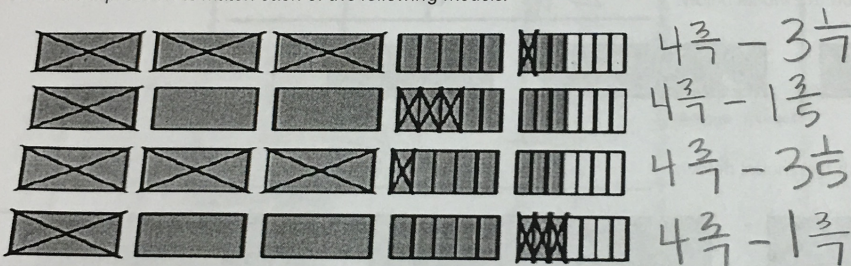2. Write an expression that can be used to solve the expression "6 fourths minus 11 twentieths"?
5.NF.1

$$\frac{6\times5}{4\times5} - \frac{11}{20} = \frac{30}{20} - \frac{11}{20} = \frac{19}{20}$$

3. Cameron rode her bike for 3 fifths mile and ran for 2 thirds mile. Write an equation to find out how far she went altogether.
5.NF.2

$$\frac{3\times3}{5\times3} + \frac{2\times5}{3\times5} = \frac{9}{15} + \frac{10}{15} = \frac{19}{15}$$

4. Write an expression to match each of the following models.
5.NF.1

$$4\frac{3}{7} - 3\frac{1}{7}$$

$$4\frac{3}{7} - 1\frac{3}{5}$$

$$4\frac{3}{7} - 3\frac{1}{5}$$

$$4\frac{3}{7} - 1\frac{3}{7}$$

5. Canden is working on a science experiment. He needs 2 eighths cup of vinegar and 3 fifths cups of water to complete his experiment. Write an expression that can be used to find the amount of vinegar and water Canden needs?
5.NF.1

$$\frac{2\times5}{8\times5} + \frac{3\times8}{5\times8} = \frac{10}{40} + \frac{24}{40}$$

6. Drew jogs 2 thirds mile on Saturday and 1 half mile on Sunday. Zeina jogs 3 fourths mile on Saturday and 1 and a half miles on Sunday. Write an equation that shows a correct way to find how many more miles Zeina jogs than Drew?
5.NF.1

$$\left(\frac{3}{4} + 1\frac{1}{2}\right) - \left(\frac{2}{3} + \frac{1}{2}\right) = 2\frac{1}{4} - 1\frac{1}{6}$$

$$\frac{3}{4} + \frac{6}{4} = \frac{9}{4} \qquad \frac{4}{6} + \frac{3}{6} = \frac{7}{6}$$

7. Write an equation that could be used to solve 4 eighteenths plus 1 third.
5.NF.1

$$\frac{4}{18} + \frac{1\times6}{3\times6} = \frac{4}{18} + \frac{6}{18}$$

8. Mahmod has 3 ropes. Each one is 2 and 1 third feet long. Write at least 3 expressions that can be used to find the
5.NF.1 total length of the ropes.

① $3 \times 2\frac{1}{3}$

② $2\frac{1}{3} + 2\frac{1}{3} + 2\frac{1}{3}$

③ $3 \times \frac{7}{3}$

④ $\frac{7}{3} + \frac{7}{3} + \frac{7}{3}$

9. Write 3 expressions that could be used to find the sum of:
5.NF.1

$$2\frac{1}{2} + \frac{1}{4}$$

a. $2\frac{1}{2} + \frac{1}{4} = \frac{10}{4} + \frac{1}{4} = \frac{11}{4}$

b. $2\frac{1}{2} + \frac{1}{4} = \frac{20}{8} + \frac{2}{8} = \frac{22}{8}$

c. $2\frac{1}{2} + \frac{1}{4} = \frac{30}{12} + \frac{3}{12} = \frac{33}{12}$

10. Preston needs to add 4 thirds and 2 sixths and he knows that he needs to find equivalent fractions to correctly find the sum. Write at
5.NF.1 least 3 expressions that could be used to find the sum.

$\frac{4}{3} + \frac{2}{6} \longrightarrow$ ① $\frac{8}{6} + \frac{2}{6}$ ③ $\frac{24}{18} + \frac{6}{18}$

② $\frac{16}{12} + \frac{4}{12}$
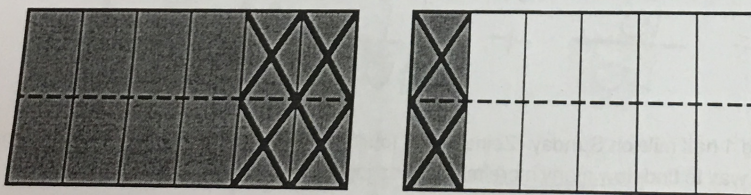
11. Write an expression to match the model below: $\underline{2\frac{3}{4} - \frac{2}{4}}$
5.NF.1

12. Write an expression to match the model below: $\underline{2\frac{5}{6} - 1\frac{2}{6}}$
5.NF.1

13. Write an expression to match the model below: $\underline{1\frac{1}{6} - \frac{1}{2}}$
5.NF.1

14. Write an expression to match the model below: $\underline{\frac{5}{6} + \frac{2}{3}}$
5.NF.1