

Getting Ready for

JUMP Math

Introductory Unit Using Fractions

Companion to Workbooks 3 & 4

This workbook accompanies the
Teacher's Manual: Getting Ready for JUMP Math



jump math™

MULTIPLYING POTENTIAL.

Author: John Mighton

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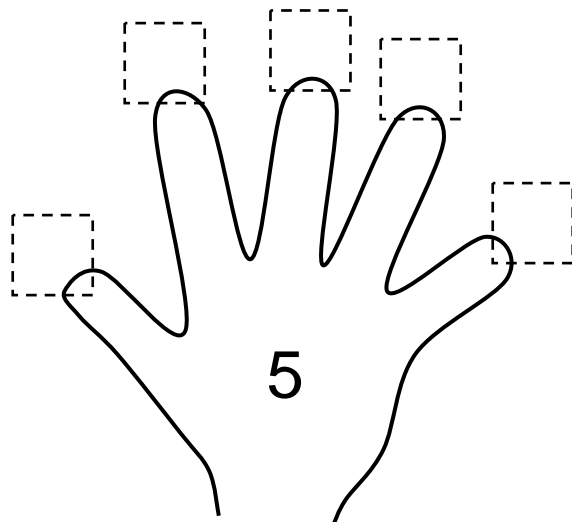
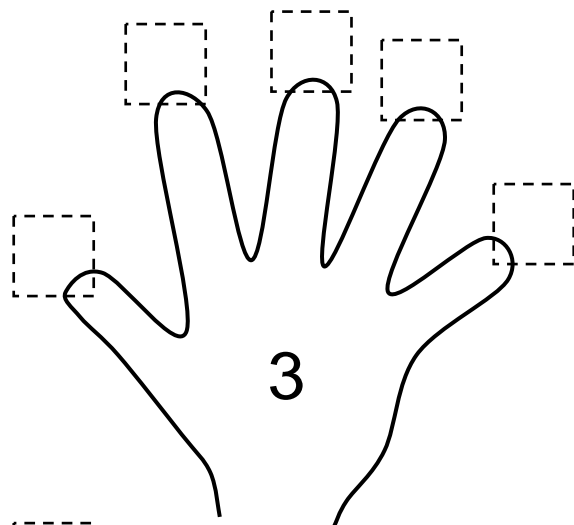
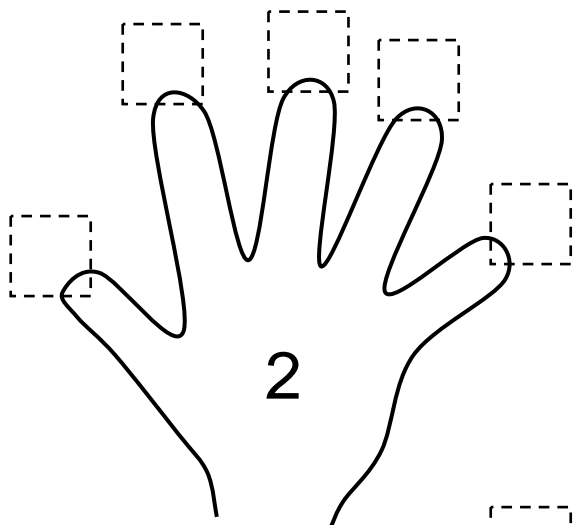
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Worksheet

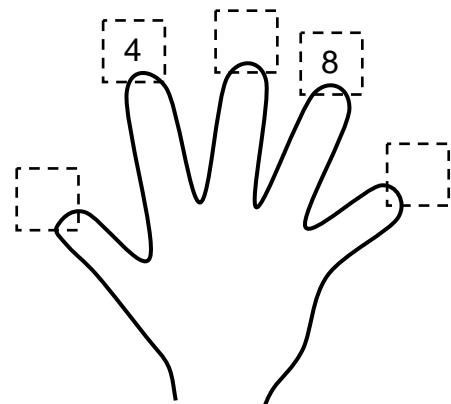
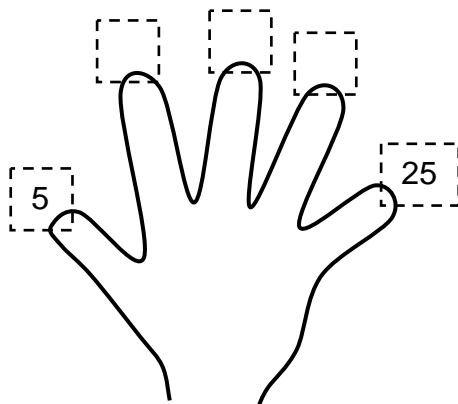
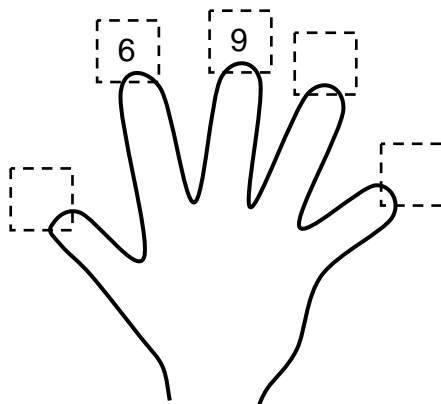
Counting by 2, 3 and 5

F-1

1. Complete the following hands:



BONUS: Try to do it when the top of this page is covered!



Worksheet**Counting by 2, 3 and 5****F-1 (con't)**

1. Complete the following questions. (Hint: Use your 2 hand)

$3 \times 2 = \underline{\quad}$

$1 \times 2 = \underline{\quad}$

$4 \times 2 = \underline{\quad}$

$3 \times 2 = \underline{\quad}$

$1 \times 2 = \underline{\quad}$

$5 \times 2 = \underline{\quad}$

$2 \times 2 = \underline{\quad}$

$4 \times 2 = \underline{\quad}$

2. Complete the following questions. (Hint: Use your 3 hand)

$3 \times 3 = \underline{\quad}$

$2 \times 3 = \underline{\quad}$

$4 \times 3 = \underline{\quad}$

$3 \times 3 = \underline{\quad}$

$1 \times 3 = \underline{\quad}$

$3 \times 3 = \underline{\quad}$

$5 \times 3 = \underline{\quad}$

$2 \times 3 = \underline{\quad}$

3. Complete the following questions. (Hint: Use your 5 hand)

$3 \times 5 = \underline{\quad}$

$2 \times 5 = \underline{\quad}$

$4 \times 5 = \underline{\quad}$

$3 \times 5 = \underline{\quad}$

$1 \times 5 = \underline{\quad}$

$3 \times 5 = \underline{\quad}$

$5 \times 5 = \underline{\quad}$

$2 \times 5 = \underline{\quad}$



4. Diagnostic Quiz: Complete the following questions.

$3 \times 3 = \underline{\quad}$

$2 \times 2 = \underline{\quad}$

$4 \times 5 = \underline{\quad}$

$4 \times 2 = \underline{\quad}$

$1 \times 5 = \underline{\quad}$

$3 \times 5 = \underline{\quad}$

$2 \times 5 = \underline{\quad}$

$5 \times 3 = \underline{\quad}$

$3 \times 2 = \underline{\quad}$

$2 \times 3 = \underline{\quad}$

$4 \times 3 = \underline{\quad}$

$2 \times 2 = \underline{\quad}$

$1 \times 3 = \underline{\quad}$

$3 \times 5 = \underline{\quad}$

$4 \times 5 = \underline{\quad}$

$5 \times 5 = \underline{\quad}$

$5 \times 3 = \underline{\quad}$

$1 \times 2 = \underline{\quad}$

$2 \times 2 = \underline{\quad}$

$1 \times 5 = \underline{\quad}$

BONUS:

$1 \times 8 = \underline{\quad}$

$1 \times 21 = \underline{\quad}$

$1 \times 23 = \underline{\quad}$

$1 \times 296 = \underline{\quad}$

$1 \times 663 = \underline{\quad}$

$1 \times 0 = \underline{\quad}$

$1 \times 1 = \underline{\quad}$

$1 \times 12,035 = \underline{\quad}$

$46 \times 1 = \underline{\quad}$

$127 \times 1 = \underline{\quad}$

$2 \times 0 = \underline{\quad}$

$0 \times 189 = \underline{\quad}$

$1,905 \times 1 = \underline{\quad}$

$104,761 \times 0 = \underline{\quad}$

$0 \times 1 = \underline{\quad}$

$1 \times 6 = \underline{\quad}$

TEACHER: Do not move on until all of your students have gotten 100% on the diagnostic quiz (Q 4) on this page. Make sure your students can add and subtract one digit numbers as taught in the Appendix in the Teacher's Manual. Students can learn the skills required to do well in this unit very quickly—**do not move on until you have taught the skills covered in this section.**

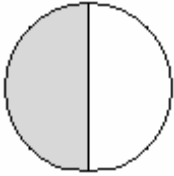
Worksheet

Exploring Fractions

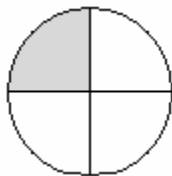
F-2

1. Name the following fractions

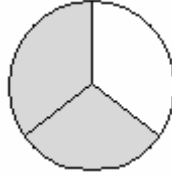
a)



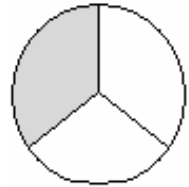
b)



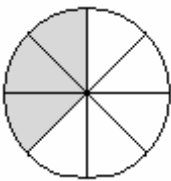
c)



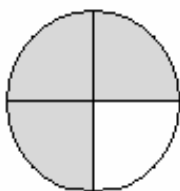
d)



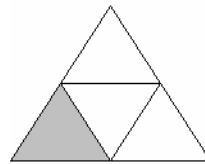
e)



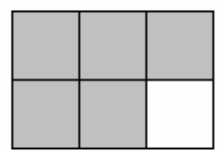
f)



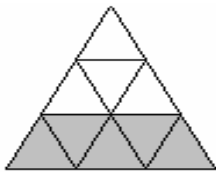
g)



h)



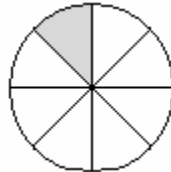
i)



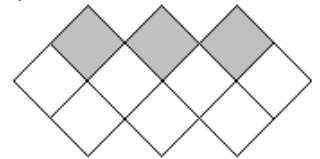
j)



k)

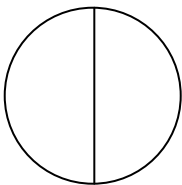


l)

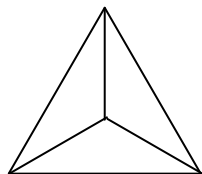


2. Shade the fractions named

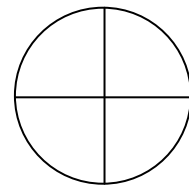
a) $\frac{1}{2}$



b) $\frac{1}{3}$



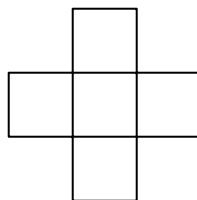
c) $\frac{3}{4}$



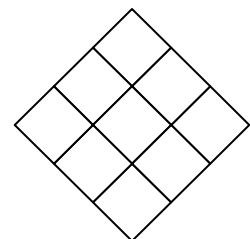
d) $\frac{3}{6}$



e) $\frac{2}{5}$



f) $\frac{5}{9}$



Worksheet**Adding and Subtracting Fractions****F-3 A**

1. Add

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

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

$$\frac{2}{11} + \frac{1}{11}$$

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

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

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

$$\frac{3}{17} + \frac{2}{17}$$

$$\frac{1}{21} + \frac{4}{21}$$

$$\frac{4}{9} + \frac{3}{9}$$

2. Subtract

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

$$\frac{2}{7} - \frac{1}{7}$$

$$\frac{4}{11} - \frac{2}{11}$$

$$\frac{5}{8} - \frac{2}{8}$$

$$\frac{6}{17} - \frac{2}{17}$$

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

3. Advanced

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

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

$$\frac{1}{15} + \frac{2}{15} + \frac{5}{15}$$

BONUS:

$$\frac{2}{11} + \frac{5}{11} - \frac{3}{11}$$

Worksheet**Adding and Subtracting Fractions****F-3 B**

1. Add

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

$$\frac{4}{7} + \frac{2}{7}$$

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

$$\frac{8}{17} + \frac{3}{17}$$

$$\frac{5}{19} + \frac{11}{19}$$

$$\frac{12}{32} + \frac{13}{32}$$

2. Subtract

$$\frac{7}{11} - \frac{1}{11}$$

$$\frac{8}{10} - \frac{7}{10}$$

$$\frac{10}{15} - \frac{3}{15}$$

$$\frac{15}{19} - \frac{12}{19}$$

$$\frac{16}{17} - \frac{3}{17}$$

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

3. Advanced

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

$$\frac{5}{17} + \frac{3}{17} + \frac{8}{17}$$

$$\frac{3}{12} + \frac{1}{12} + \frac{2}{12} + \frac{5}{12}$$

BONUS:

$$\frac{8}{11} + \frac{2}{11} - \frac{5}{11}$$

$$\frac{9}{11} - \frac{2}{11} - \frac{1}{11}$$

$$\frac{12}{35} + \frac{11}{35} - \frac{8}{35}$$

Worksheet**Adding and Subtracting Fractions (Warm-Up)****F-4 A**

TEACHER: If your students find the material on pages 8 and 9 easy they don't have to do every question. They can do one or two of each type and then move on to page 10. We recommend that younger students do every question.

1. Write times signs beside the fractions:

Example: $\frac{1}{5} + \frac{1}{3} \longrightarrow \begin{array}{c} \times \\ \times \end{array} \frac{1}{5} + \frac{1}{3} \begin{array}{c} \times \\ \times \end{array}$

$\frac{1}{2} + \frac{1}{3}$	$\frac{1}{2} + \frac{1}{5}$	$\frac{1}{3} + \frac{1}{5}$
$\frac{2}{3} + \frac{1}{2}$	$\frac{2}{3} + \frac{1}{5}$	$\frac{2}{5} + \frac{1}{3}$

2. Switch the bottom numbers:

Example: $\frac{1}{5} + \frac{1}{3} \longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$

$\begin{array}{c} \times \\ \times \end{array} \frac{1}{2} + \frac{1}{3} \begin{array}{c} \times \\ \times \end{array}$	$\begin{array}{c} \times \\ \times \end{array} \frac{1}{2} + \frac{1}{5} \begin{array}{c} \times \\ \times \end{array}$	$\begin{array}{c} \times \\ \times \end{array} \frac{1}{3} + \frac{1}{5} \begin{array}{c} \times \\ \times \end{array}$
$\begin{array}{c} \times \\ \times \end{array} \frac{2}{3} + \frac{1}{2} \begin{array}{c} \times \\ \times \end{array}$	$\begin{array}{c} \times \\ \times \end{array} \frac{2}{3} + \frac{1}{5} \begin{array}{c} \times \\ \times \end{array}$	$\begin{array}{c} \times \\ \times \end{array} \frac{2}{5} + \frac{1}{3} \begin{array}{c} \times \\ \times \end{array}$
$\begin{array}{c} \times \\ \times \end{array} \frac{3}{5} + \frac{1}{2} \begin{array}{c} \times \\ \times \end{array}$	$\begin{array}{c} \times \\ \times \end{array} \frac{4}{5} + \frac{1}{2} \begin{array}{c} \times \\ \times \end{array}$	$\begin{array}{c} \times \\ \times \end{array} \frac{2}{3} + \frac{2}{5} \begin{array}{c} \times \\ \times \end{array}$

3. Write times signs and switch the numbers:

Example: $\frac{1}{5} + \frac{1}{3} \longrightarrow \begin{array}{c} \times \\ \times \end{array} \frac{1}{5} + \frac{1}{3} \begin{array}{c} \times \\ \times \end{array} \longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$

$\frac{1}{2} + \frac{1}{3}$	$\frac{1}{2} + \frac{1}{5}$	$\frac{1}{3} + \frac{1}{5}$
$\frac{2}{3} + \frac{1}{2}$	$\frac{2}{3} + \frac{1}{5}$	$\frac{2}{5} + \frac{1}{3}$
$\frac{3}{5} + \frac{1}{2}$	$\frac{4}{5} + \frac{1}{2}$	$\frac{2}{3} + \frac{2}{5}$

Worksheet**Adding and Subtracting Fractions (Warm-Up)****F-4 A (con't)**

4. Write an equal sign and draw lines for the new fractions:

Example: $\frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} \longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$
 $= \quad - \quad + \quad -$

$\frac{3 \times 1}{3 \times 2} + \frac{1 \times 2}{3 \times 2}$	$\frac{5 \times 1}{5 \times 2} + \frac{1 \times 2}{5 \times 2}$	$\frac{5 \times 1}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$
$\frac{2 \times 2}{2 \times 3} + \frac{1 \times 3}{2 \times 3}$	$\frac{5 \times 2}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$	$\frac{3 \times 2}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$
$\frac{2 \times 3}{2 \times 5} + \frac{1 \times 5}{2 \times 5}$	$\frac{2 \times 4}{2 \times 5} + \frac{1 \times 5}{2 \times 5}$	$\frac{5 \times 2}{5 \times 3} + \frac{2 \times 3}{5 \times 3}$

5. Perform the multiplications:

Example: $\frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} \longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$
 $= \quad - \quad + \quad -$ $= \frac{3}{15} + \frac{5}{15}$

$\frac{3 \times 1}{3 \times 2} + \frac{1 \times 2}{3 \times 2}$ $= \quad - \quad + \quad -$	$\frac{5 \times 1}{5 \times 2} + \frac{1 \times 2}{5 \times 2}$ $= \quad - \quad + \quad -$	$\frac{5 \times 1}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$ $= \quad - \quad + \quad -$
$\frac{2 \times 2}{2 \times 3} + \frac{1 \times 3}{2 \times 3}$ $= \quad - \quad + \quad -$	$\frac{5 \times 2}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$ $= \quad - \quad + \quad -$	$\frac{3 \times 2}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$ $= \quad - \quad + \quad -$
$\frac{2 \times 3}{2 \times 5} + \frac{1 \times 5}{2 \times 5}$ $= \quad - \quad + \quad -$	$\frac{2 \times 4}{2 \times 5} + \frac{1 \times 5}{2 \times 5}$ $= \quad - \quad + \quad -$	$\frac{5 \times 2}{5 \times 3} + \frac{2 \times 3}{5 \times 3}$ $= \quad - \quad + \quad -$

Worksheet**Adding and Subtracting Fractions (Warm-Up)****F-4 A (con't)**

6. Perform the additions:

$$\begin{aligned} \text{Example: } \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} &\longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} \\ &= \frac{3}{15} + \frac{5}{15} = \frac{8}{15} \end{aligned}$$

$\frac{3 \times 1}{3 \times 2} + \frac{1 \times 2}{3 \times 2}$ $= \frac{3}{6} + \frac{2}{6} = \text{—}$	$\frac{5 \times 1}{5 \times 2} + \frac{1 \times 2}{5 \times 2}$ $= \frac{5}{10} + \frac{2}{10} = \text{—}$	$\frac{5 \times 1}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$ $= \frac{5}{15} + \frac{3}{15} = \text{—}$
$\frac{2 \times 2}{2 \times 3} + \frac{1 \times 3}{2 \times 3}$ $= \frac{4}{6} + \frac{3}{6} = \text{—}$	$\frac{5 \times 2}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$ $= \frac{10}{15} + \frac{3}{15} = \text{—}$	$\frac{3 \times 2}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$ $= \frac{6}{15} + \frac{5}{15} = \text{—}$
$\frac{2 \times 3}{2 \times 5} + \frac{1 \times 5}{2 \times 5}$ $= \frac{6}{10} + \frac{5}{10} = \text{—}$	$\frac{2 \times 4}{2 \times 5} + \frac{1 \times 5}{2 \times 5}$ $= \frac{8}{10} + \frac{5}{10} = \text{—}$	$\frac{5 \times 2}{5 \times 3} + \frac{2 \times 3}{5 \times 3}$ $= \frac{10}{15} + \frac{6}{15} = \text{—}$

7. Perform the multiplications and the additions:

$$\begin{aligned} \text{Example: } \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} &\longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} \longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} \\ &= \text{—} + \text{—} = \frac{3}{15} + \frac{5}{15} = \frac{8}{15} \end{aligned}$$

$\frac{3 \times 1}{3 \times 2} + \frac{1 \times 2}{3 \times 2}$ $= \text{—} + \text{—} = \text{—}$	$\frac{5 \times 1}{5 \times 2} + \frac{1 \times 2}{5 \times 2}$ $= \text{—} + \text{—} = \text{—}$	$\frac{5 \times 1}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$ $= \text{—} + \text{—} = \text{—}$
$\frac{2 \times 2}{2 \times 3} + \frac{1 \times 3}{2 \times 3}$ $= \text{—} + \text{—} = \text{—}$	$\frac{5 \times 2}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$ $= \text{—} + \text{—} = \text{—}$	$\frac{3 \times 2}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$ $= \text{—} + \text{—} = \text{—}$
$\frac{2 \times 3}{2 \times 5} + \frac{1 \times 5}{2 \times 5}$ $= \text{—} + \text{—} = \text{—}$	$\frac{2 \times 4}{2 \times 5} + \frac{1 \times 5}{2 \times 5}$ $= \text{—} + \text{—} = \text{—}$	$\frac{5 \times 2}{5 \times 3} + \frac{2 \times 3}{5 \times 3}$ $= \text{—} + \text{—} = \text{—}$

Worksheet**Adding and Subtracting Fractions****F-4 A (con't)**

8. Add

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

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

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

9. Advanced

$$\frac{2}{5} + \frac{1}{3}$$

$$\frac{3}{5} + \frac{1}{2}$$

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

$$\frac{1}{5} + \frac{2}{3}$$

$$\frac{4}{5} + \frac{1}{2}$$

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

BONUS:

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

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

$$\frac{3}{5} - \frac{1}{2}$$

Worksheet**Adding and Subtracting Fractions****F-4 B**

1. Add

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

$$\frac{1}{3} + \frac{1}{4}$$

$$\frac{1}{5} + \frac{1}{6}$$

2. Advanced

$$\frac{2}{5} + \frac{3}{4}$$

$$\frac{1}{5} + \frac{2}{3}$$

$$\frac{1}{6} + \frac{2}{5}$$

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

$$\frac{1}{5} + \frac{5}{6}$$

$$\frac{3}{4} + \frac{2}{3}$$

BONUS:

$$\frac{3}{4} - \frac{2}{3}$$

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

$$\frac{5}{6} - \frac{3}{5}$$

Name: _____

Date: _____

page 11

Worksheet

Adding and Subtracting Fractions

F-4 C

1. Add

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

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

$$\frac{1}{9} + \frac{1}{4}$$

2. Advanced

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

$$\frac{2}{5} + \frac{2}{9}$$

$$\frac{5}{7} + \frac{1}{6}$$

$$\frac{3}{4} + \frac{2}{7}$$

$$\frac{1}{8} + \frac{2}{3}$$

$$\frac{1}{7} + \frac{4}{9}$$

BONUS:

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

$$\frac{5}{7} - \frac{3}{8}$$

$$\frac{5}{9} - \frac{1}{7}$$

Worksheet**Adding and Subtracting Fractions (Warm Up)****F-5 A**

1. Write how many times the lesser denominator goes into the greater denominator:

Example: $\frac{1}{2} + \frac{1}{10} \longrightarrow \frac{5 \times 1}{5 \times 2} + \frac{1}{10}$

$\frac{1}{2} + \frac{1}{10}$	$\frac{1}{5} + \frac{1}{10}$	$\frac{1}{2} + \frac{1}{8}$
$\frac{1}{3} + \frac{1}{6}$	$\frac{1}{5} + \frac{1}{20}$	$\frac{1}{2} + \frac{1}{6}$
$\frac{2}{5} + \frac{1}{25}$	$\frac{3}{5} + \frac{1}{15}$	$\frac{1}{2} + \frac{7}{8}$

2. Change the fraction with the lesser denominator and keep the other fraction the same:

Example: $\frac{1}{2} + \frac{1}{10} \longrightarrow \frac{5 \times 1}{5 \times 2} + \frac{1}{10} \longrightarrow \frac{5 \times 1}{5 \times 2} + \frac{1}{10}$
 $= \frac{5}{10} + \frac{1}{10}$

$\frac{1}{2} + \frac{1}{10}$	$\frac{1}{5} + \frac{1}{10}$	$\frac{1}{2} + \frac{1}{8}$
$\frac{1}{3} + \frac{1}{6}$	$\frac{1}{5} + \frac{1}{20}$	$\frac{1}{2} + \frac{1}{6}$
$\frac{2}{5} + \frac{1}{25}$	$\frac{3}{5} + \frac{1}{15}$	$\frac{1}{2} + \frac{7}{8}$

Worksheet**Adding and Subtracting Fractions****F-5 A (con't)**

3. Add (Remember: change only one denominator)

$$\frac{1}{2} + \frac{1}{10}$$

$$\frac{1}{5} + \frac{1}{10}$$

$$\frac{1}{2} + \frac{1}{8}$$

$$\frac{1}{3} + \frac{1}{6}$$

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

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

4. Advanced

$$\frac{2}{3} + \frac{1}{15}$$

$$\frac{2}{5} + \frac{1}{10}$$

$$\frac{3}{5} + \frac{2}{15}$$

$$\frac{2}{3} + \frac{1}{12}$$

$$\frac{1}{4} + \frac{3}{8}$$

$$\frac{1}{4} + \frac{3}{12}$$

$$\frac{3}{4} + \frac{1}{2}$$

$$\frac{4}{25} + \frac{1}{5}$$

$$\frac{3}{15} + \frac{4}{5}$$

BONUS:

$$\frac{7}{20} - \frac{1}{5}$$

$$\frac{3}{8} - \frac{1}{4}$$

$$\frac{1}{2} - \frac{3}{10}$$

Worksheet**Adding and Subtracting Fractions****F-5 B**

1. Add

$$\frac{1}{4} + \frac{1}{12}$$

$$\frac{1}{6} + \frac{1}{18}$$

$$\frac{1}{7} + \frac{1}{28}$$

2. Advanced

$$\frac{1}{8} + \frac{3}{16}$$

$$\frac{2}{7} + \frac{4}{21}$$

$$\frac{1}{6} + \frac{2}{24}$$

$$\frac{1}{9} + \frac{3}{18}$$

$$\frac{5}{6} + \frac{7}{30}$$

$$\frac{7}{24} + \frac{1}{8}$$

$$\frac{1}{9} + \frac{11}{27}$$

$$\frac{5}{12} + \frac{2}{6}$$

$$\frac{4}{7} + \frac{5}{42}$$

BONUS:

$$\frac{7}{8} - \frac{1}{16}$$

$$\frac{5}{21} - \frac{1}{7}$$

$$\frac{5}{6} - \frac{3}{48}$$

Worksheet**Fractions (Warm-Up)****F-6 A**

1. Write yes beside the number in bold if you say the number when counting by 2's.
If you don't, write no.

a) **6** _____ b) **3** _____ c) **9** _____ d) **8** _____
e) **10** _____ f) **4** _____ g) **5** _____ h) **7** _____

2. Write yes beside the given number if you say the number when counting by 3's.
If you don't, write no.

a) **9** _____ b) **4** _____ c) **12** _____ d) **13** _____
e) **6** _____ f) **5** _____ g) **8** _____ h) **14** _____

3. Write yes beside the given number if you say the number when counting by 5's.
If you don't, write no.

a) **10** _____ b) **12** _____ c) **15** _____ d) **8** _____
e) **20** _____ f) **9** _____ g) **14** _____ h) **11** _____

4. Circle the smaller denominator. (The first one has been done for you.)

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

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

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

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

$$\frac{3}{5} + \frac{1}{2}$$

$$\frac{1}{2} + \frac{1}{8}$$

5. Count by the lesser denominator, and write yes if you say the greater denominator. Write no if you don't. (The first one has been done for you.)

no

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

$$\frac{1}{\textcircled{3}} + \frac{1}{5}$$

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

$$\frac{1}{4} + \frac{1}{8}$$

$$\frac{3}{5} + \frac{1}{2}$$

$$\frac{1}{2} + \frac{1}{8}$$

$$\frac{1}{2} + \frac{1}{8}$$

$$\frac{3}{15} + \frac{1}{3}$$

$$\frac{1}{5} + \frac{1}{9}$$

Worksheet**Fractions (Warm-Up)****F-6 A (con't)**

6. Count by the lesser denominator until you reach the greater denominator. Write the number of fingers you have raised beside the times signs:

$$\begin{array}{c} \text{yes} \\ \hline x \frac{1}{2} + \frac{1}{6} \end{array}$$

$$\begin{array}{c} \text{yes} \\ \hline x \frac{1}{5} + \frac{1}{10} \end{array}$$

$$\begin{array}{c} \text{yes} \\ \hline x \frac{1}{3} + \frac{1}{9} \end{array}$$

7. Complete the first step of addition by multiplying each fraction by the opposite denominator:

$$\begin{array}{c} \text{no} \\ \hline x \frac{1}{2} + \frac{1}{3} x \end{array}$$

$$\begin{array}{c} \text{no} \\ \hline x \frac{1}{2} + \frac{1}{5} x \end{array}$$

$$\begin{array}{c} \text{no} \\ \hline x \frac{1}{3} + \frac{1}{5} x \end{array}$$

8. Write “yes” or “no” above the following fractions. If you wrote “yes,” then complete the first step of addition as in Question 6 above. If you wrote “no,” complete the first step as in Question 7 above:

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

$$\frac{3}{5} + \frac{1}{10}$$

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

$$\frac{1}{3} + \frac{1}{4}$$

BONUS:

$$\frac{3}{15} + \frac{1}{5}$$

$$\frac{1}{10} + \frac{1}{5}$$

9. Add or Subtract (change *one* denominator or change *both* –for each question you have to decide what to do). Start by writing “yes” or “no” above the fraction:

$$\frac{1}{4} + \frac{1}{5}$$

$$\frac{2}{3} + \frac{1}{5}$$

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

BONUS:

$$\frac{3}{20} + \frac{4}{5}$$

$$\frac{2}{15} + \frac{3}{5}$$

$$\frac{1}{16} + \frac{1}{4}$$

Worksheet**Fractions****F-6 B**

1. Advanced: Add or Subtract (change *one* denominator or change *both*)

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

$$\frac{2}{3} + \frac{1}{5}$$

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

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

$$\frac{1}{4} + \frac{1}{5}$$

$$\frac{1}{2} - \frac{1}{10}$$

$$\frac{1}{4} + \frac{5}{16}$$

$$\frac{3}{20} + \frac{1}{4}$$

$$\frac{1}{4} + \frac{1}{3}$$

2. If the denominators are the same, write "same", otherwise change *one* denominator or change *both*. Then complete the questions.

$$\frac{1}{3} + \frac{1}{12}$$

$$\frac{1}{4} + \frac{3}{5}$$

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

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

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

$$\frac{4}{5} + \frac{3}{20}$$

Name: _____

Date: _____

page 18

Worksheet**Fractions****F-6 C**

1. Add or Subtract

$$\frac{1}{4} - \frac{1}{12}$$

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

$$\frac{2}{3} + \frac{4}{5}$$

$$\frac{7}{25} - \frac{1}{5}$$

$$\frac{3}{12} + \frac{1}{4}$$

$$\frac{1}{2} - \frac{1}{14}$$

$$\frac{1}{6} + \frac{1}{18}$$

$$\frac{1}{5} + \frac{7}{40}$$

$$\frac{7}{24} + \frac{1}{6}$$

$$\frac{1}{6} + \frac{1}{5}$$

$$\frac{5}{21} - \frac{1}{7}$$

$$\frac{1}{4} + \frac{5}{24}$$

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

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

$$\frac{1}{2} + \frac{1}{16}$$

BONUS:

$$\frac{5}{8} + \frac{3}{7}$$

$$\frac{4}{9} + \frac{1}{27}$$

$$\frac{3}{8} + \frac{5}{32}$$

Worksheet**Fractions (Warm Up)****F-7 A**

1. Write times signs and numbers where necessary:

Example: $\frac{1}{2} + \frac{1}{3} + \frac{1}{6} \longrightarrow \frac{3 \times 1}{3 \times 2} + \frac{2 \times 1}{2 \times 3} + \frac{1}{6}$

$\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$	$\frac{1}{3} + \frac{1}{5} + \frac{1}{15}$
$\frac{1}{2} + \frac{1}{4} + \frac{3}{8}$	$\frac{1}{4} + \frac{1}{5} + \frac{1}{20}$
$\frac{2}{3} + \frac{1}{4} + \frac{1}{12}$	$\frac{1}{5} + \frac{3}{10} + \frac{2}{20}$

2. Write times signs and numbers, and carry out multiplication as needed:

Example: $\frac{1}{2} + \frac{1}{3} + \frac{1}{6} \longrightarrow \frac{3 \times 1}{3 \times 2} + \frac{2 \times 1}{2 \times 3} + \frac{1}{6}$
 $= \frac{3}{6} + \frac{2}{6} + \frac{1}{6}$

$\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$	$\frac{1}{3} + \frac{1}{5} + \frac{1}{15}$
$\frac{1}{2} + \frac{1}{4} + \frac{3}{8}$	$\frac{1}{4} + \frac{1}{5} + \frac{1}{20}$
$\frac{2}{3} + \frac{1}{4} + \frac{1}{12}$	$\frac{1}{5} + \frac{3}{10} + \frac{2}{20}$

Worksheet**Fractions****F-7 A (con't)**

3. Solve completely:

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

$$\frac{1}{3} + \frac{1}{5} + \frac{1}{15}$$

$$\frac{1}{2} + \frac{1}{4} + \frac{3}{8}$$

$$\frac{1}{4} + \frac{1}{5} + \frac{5}{20}$$

$$\frac{2}{3} + \frac{1}{4} + \frac{1}{12}$$

$$\frac{1}{5} + \frac{3}{10} + \frac{2}{20}$$

BONUS:

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

$$\frac{2}{3} + \frac{1}{4} + \frac{1}{12}$$

$$\frac{3}{4} + \frac{1}{8} + \frac{1}{2}$$

$$\frac{1}{20} + \frac{1}{4} + \frac{1}{5}$$

Worksheet**Reducing Fractions (Warm Up)****F-8 A**

1. Divide:

$10 \div 5 =$	$15 \div 5 =$	$20 \div 5 =$	$25 \div 5 =$	$5 \div 5 =$
$8 \div 2 =$	$4 \div 2 =$	$2 \div 2 =$	$6 \div 2 =$	$10 \div 2 =$
$6 \div 3 =$	$9 \div 3 =$	$15 \div 3 =$	$12 \div 3 =$	$3 \div 3 =$
$8 \div 4 =$	$12 \div 4 =$	$16 \div 4 =$	$20 \div 4 =$	$4 \div 4 =$

2. Write division signs beside the fraction:

Example: $\frac{5}{10} \longrightarrow \frac{5}{10} \div$

$\frac{5}{10}$	$\frac{5}{15}$	$\frac{5}{25}$	$\frac{5}{20}$
$\frac{2}{10}$	$\frac{2}{6}$	$\frac{2}{4}$	$\frac{2}{8}$

3. Write division signs and copy the top number:

Example: $\frac{5}{10} \longrightarrow \frac{5}{10} \div \longrightarrow \frac{5}{10} \div 5$

$\frac{5}{10}$	$\frac{5}{15}$	$\frac{5}{25}$	$\frac{5}{20}$
$\frac{2}{10}$	$\frac{2}{6}$	$\frac{2}{4}$	$\frac{2}{8}$

4. Write division sign, copy the top number, and solve:

Example: $\frac{5}{10} \longrightarrow \frac{5}{10} \div \longrightarrow \frac{5}{10} \div 5 = \frac{1}{2}$

$\frac{5}{10}$	$\frac{5}{15}$	$\frac{5}{25}$	$\frac{5}{20}$
$\frac{2}{10}$	$\frac{2}{6}$	$\frac{2}{4}$	$\frac{2}{8}$

Worksheet**Reducing Fractions****F-8 A (con't)**

5. Reduce

$$\frac{5}{10}$$

$$\frac{5}{15}$$

$$\frac{5}{25}$$

$$\frac{5}{20}$$

$$\frac{2}{10}$$

$$\frac{2}{6}$$

$$\frac{2}{4}$$

$$\frac{2}{8}$$

$$\frac{3}{6}$$

$$\frac{3}{15}$$

$$\frac{3}{12}$$

$$\frac{3}{9}$$

$$\frac{4}{8}$$

$$\frac{4}{12}$$

$$\frac{4}{20}$$

$$\frac{4}{16}$$



TEACHER: Please check the Teacher's Manual Section F-8 before proceeding to the next question.

6. Advanced: Reduce

$$\frac{10}{15}$$

$$\frac{20}{25}$$

$$\frac{15}{20}$$

$$\frac{10}{25}$$

$$\frac{4}{6}$$

$$\frac{8}{10}$$

$$\frac{6}{8}$$

$$\frac{4}{10}$$

$$\frac{6}{9}$$

$$\frac{9}{12}$$

$$\frac{6}{15}$$

$$\frac{9}{15}$$

BONUS:

$$\frac{25}{30}$$

$$\frac{12}{15}$$

$$\frac{10}{12}$$

$$\frac{8}{12}$$

Worksheet**Reducing Fractions****F-8 B**

1. Advanced: Reduce

$$\frac{6}{12}$$

$$\frac{6}{18}$$

$$\frac{6}{30}$$

$$\frac{6}{24}$$

$$\frac{7}{21}$$

$$\frac{7}{14}$$

$$\frac{7}{28}$$

$$\frac{7}{42}$$

$$\frac{8}{16}$$

$$\frac{8}{24}$$

$$\frac{8}{40}$$

$$\frac{8}{48}$$

$$\frac{9}{27}$$

$$\frac{9}{9}$$

$$\frac{9}{36}$$

$$\frac{9}{54}$$

2. Advanced: Reduce

$$\frac{12}{18}$$

$$\frac{18}{24}$$

$$\frac{14}{21}$$

$$\frac{16}{24}$$

$$\frac{21}{28}$$

$$\frac{24}{30}$$

$$\frac{24}{32}$$

$$\frac{35}{42}$$

BONUS: Add, then reduce

$$\frac{1}{20} + \frac{1}{4} + \frac{1}{5}$$

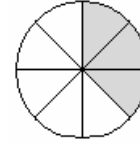
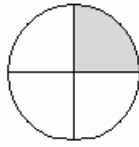
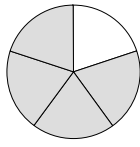
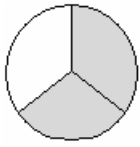
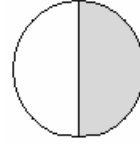
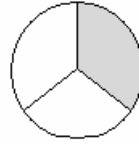
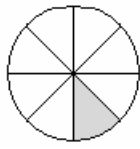
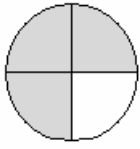
$$\frac{1}{3} + \frac{3}{12} + \frac{1}{4}$$

Worksheet

Naming Mixed & Improper Fractions (Warm Up)

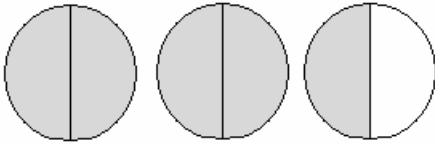
F-10 A

1. Name these fractions:

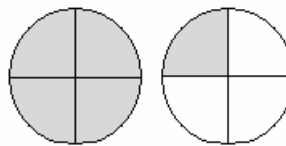


2. Write how many whole pies are shaded:

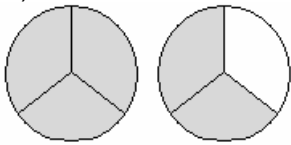
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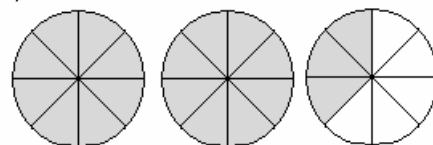
b)



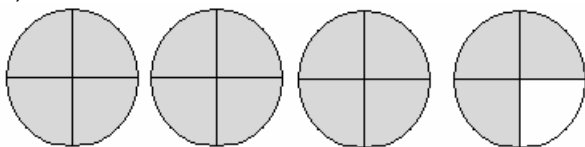
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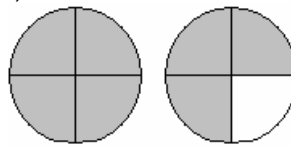
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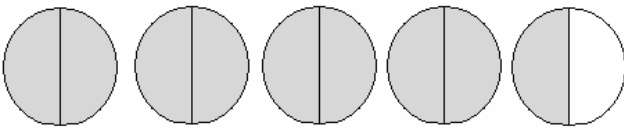
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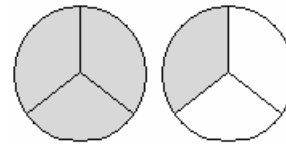
f)



g)



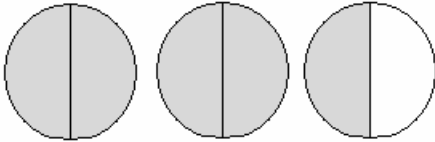
h)



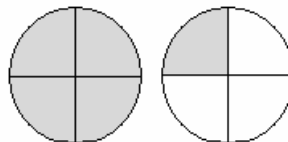
Worksheet**Naming Mixed & Improper Fractions****F-10 A (con't)**

3. Write these fractions as mixed fractions.

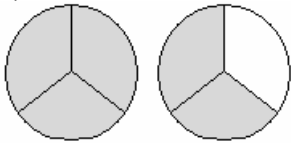
a)



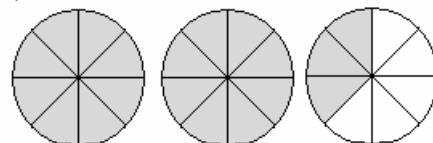
b)



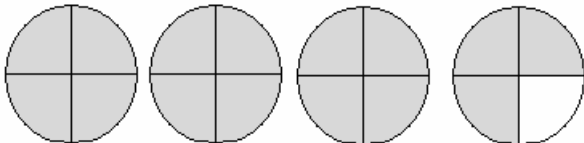
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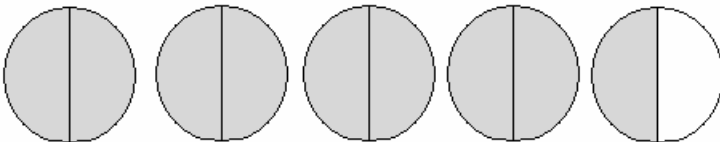
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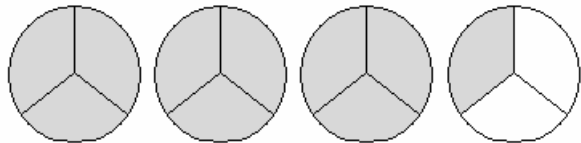
e)



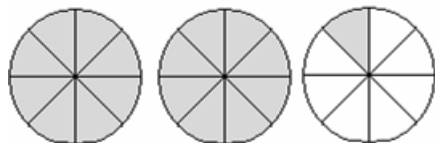
f)



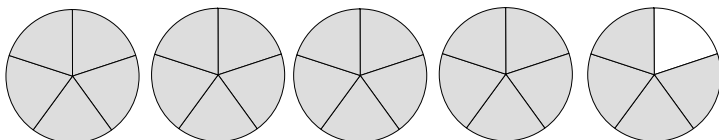
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h)

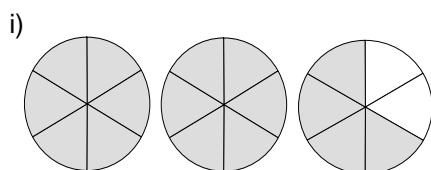
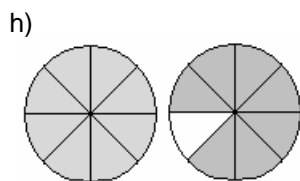
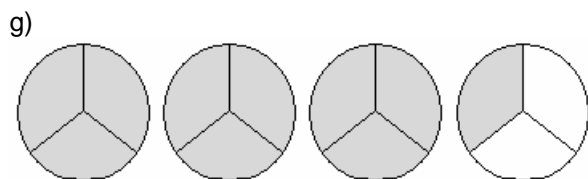
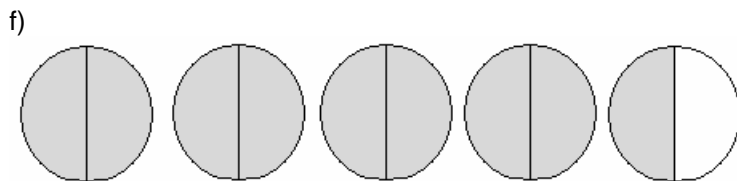
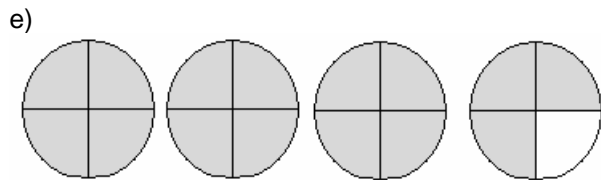
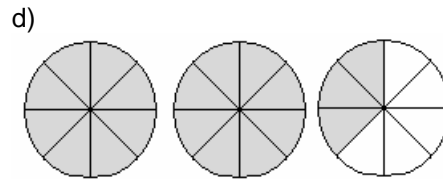
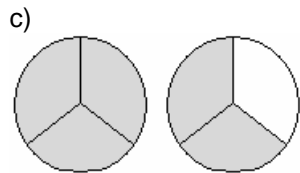
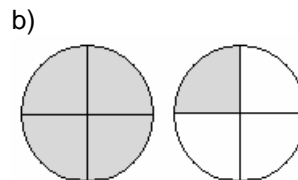
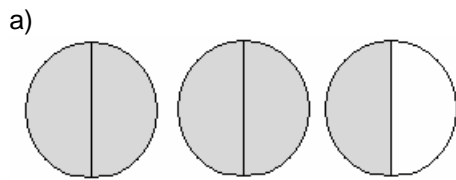


i)



Worksheet**Naming Mixed & Improper Fractions****F-10 A (con't)**

4. Write these fractions as improper fractions.

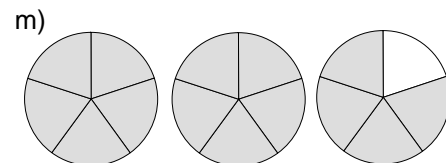
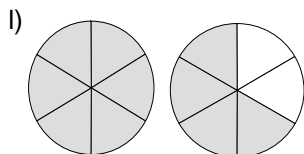
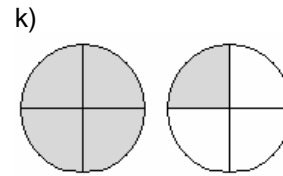
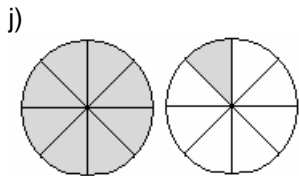
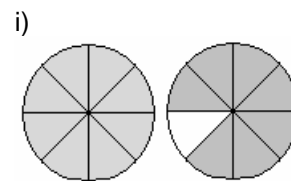
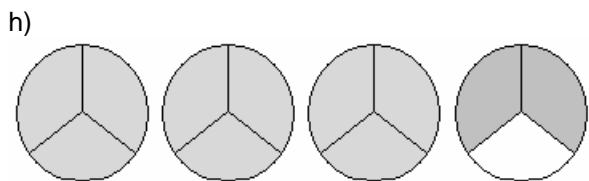
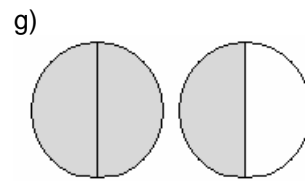
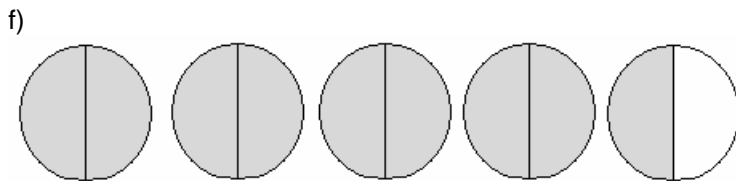
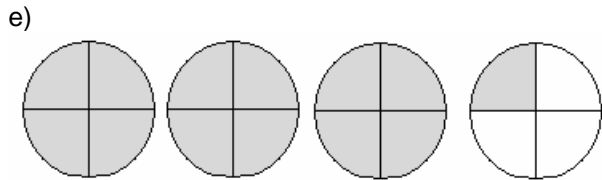
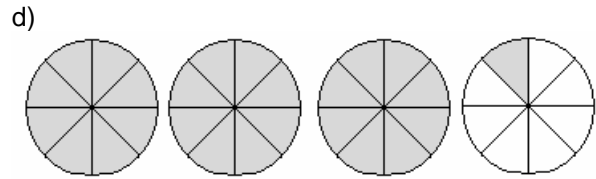
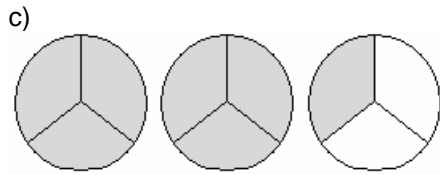
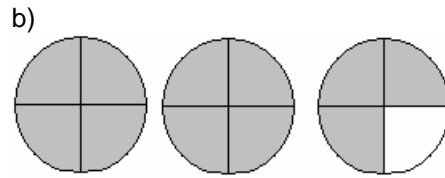
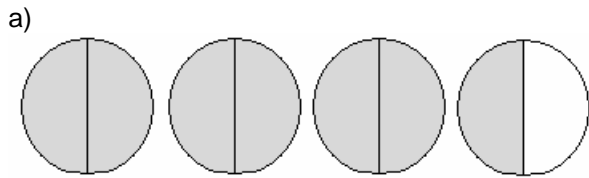


Worksheet

Mixed / Improper Fractions

F-10 B

1. Write these fractions as mixed fractions and as improper fractions.

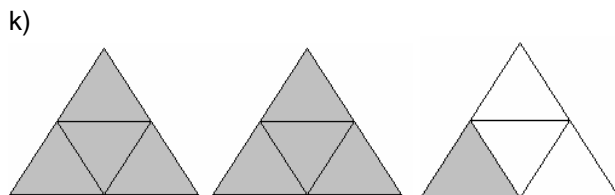
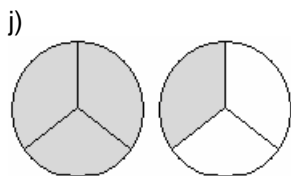
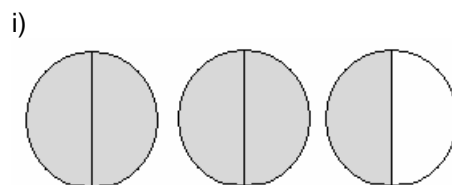
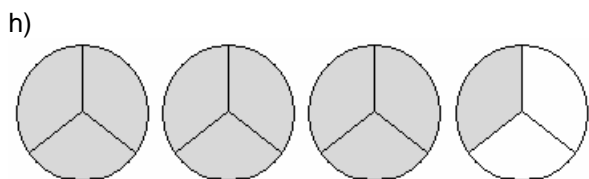
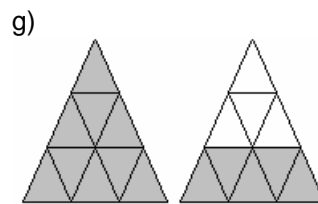
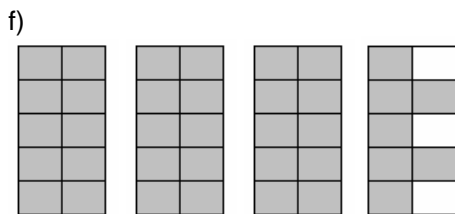
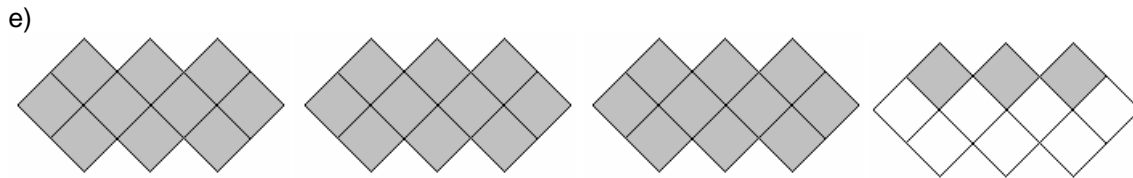
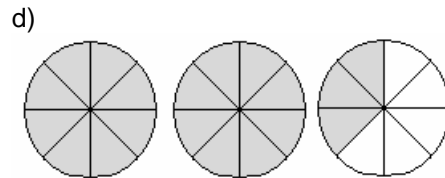
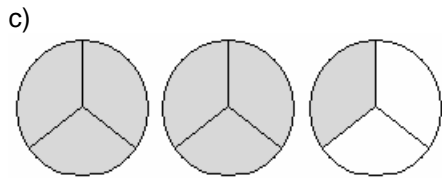
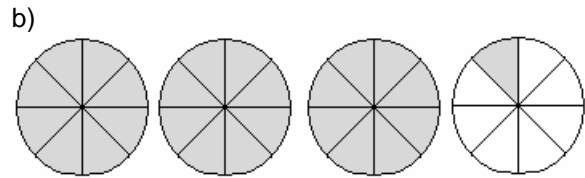
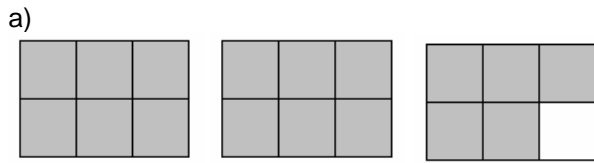


Worksheet

Mixed / Improper Fractions

F-10 B (con't)

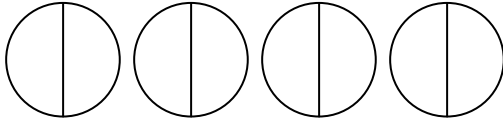
2. Write these fractions as mixed fractions and as improper fractions.



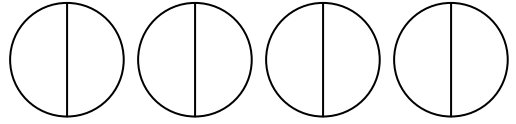
Worksheet**Mixed / Improper Fractions****F-10 C**

1. Shade one piece at a time until you have shaded the amount of pie given in bold. **There may be more pies than you need:**

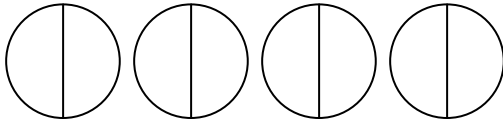
a) $2\frac{1}{2}$



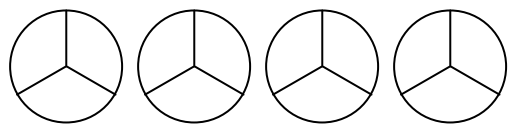
b) $3\frac{1}{2}$



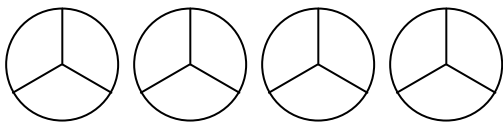
c) $1\frac{1}{2}$



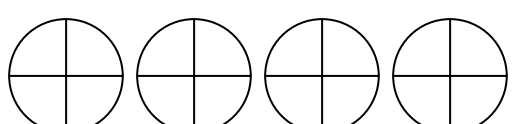
d) $2\frac{2}{3}$



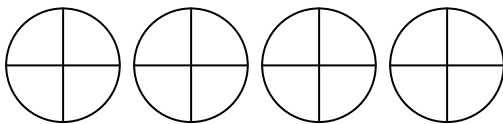
e) $3\frac{1}{3}$



f) $2\frac{3}{4}$



g) $3\frac{1}{4}$



h) $3\frac{2}{3}$



2. Draw these mixed fractions. HINT: Draw one pie at a time and colour in the pieces. Keep drawing pies and shading pieces until you have shaded the correct amount of pie.

$2\frac{1}{4}$

$3\frac{1}{4}$

$2\frac{3}{4}$

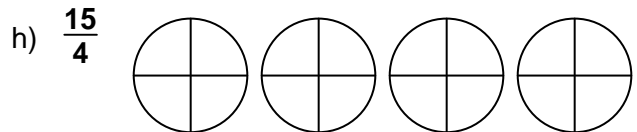
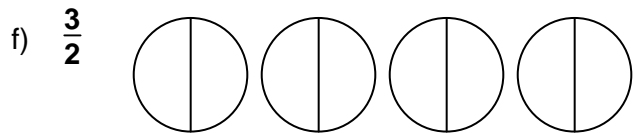
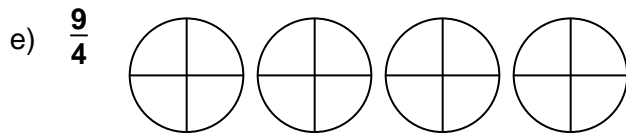
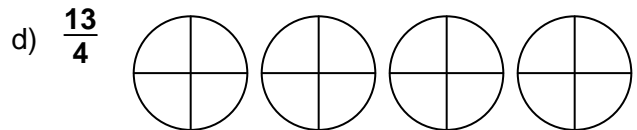
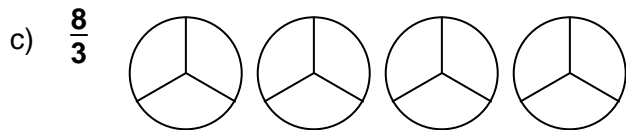
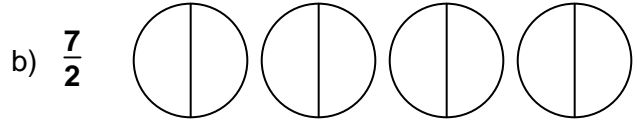
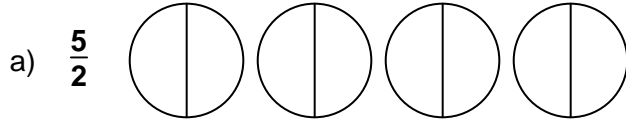
$1\frac{1}{3}$

$3\frac{1}{2}$

$3\frac{2}{3}$

Worksheet**Mixed / Improper Fractions****F-10 C (con't)**

3. Shade one piece at a time until you have shaded the amount of pie given in bold. **There may be more pies than you need:**



4. Draw these improper fractions: HINT: Draw one pie at a time and colour in the pieces. Keep drawing pies and shading pieces until you have shaded the correct amount of pie.

$\frac{5}{2}$

$\frac{7}{2}$

$\frac{7}{4}$

$\frac{9}{4}$

$\frac{8}{3}$

$\frac{11}{8}$

Name: _____

Date: _____

Notes and Rough Work

Name: _____

Date: _____

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Notes and Rough Work *(continued)*