

JUMP Math

Fractions Challenge

Level D



jump math™

MULTIPLYING POTENTIAL.

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JUMP Math

One Yonge Street, Suite 1014
Toronto, Ontario M5E 1E5
Canada
www.jumpmath.org

Writer: Dr. John Mighton

Cover Layout: Gabriella Kerr

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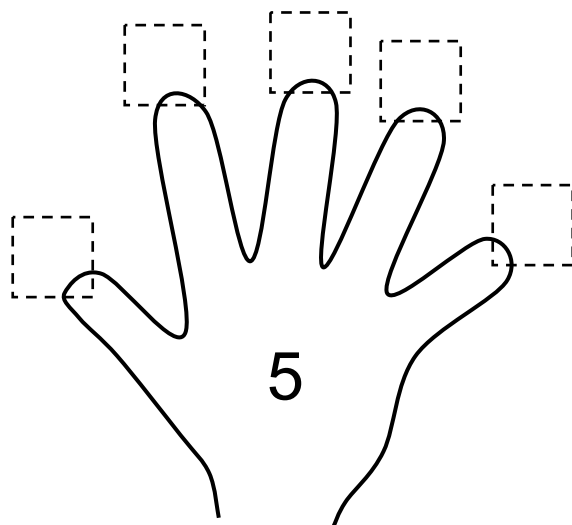
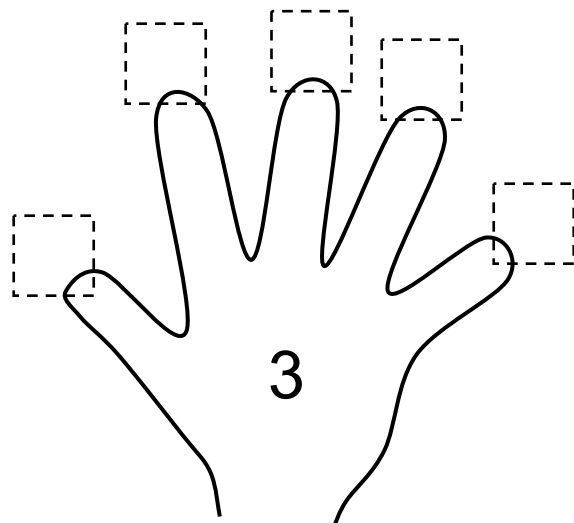
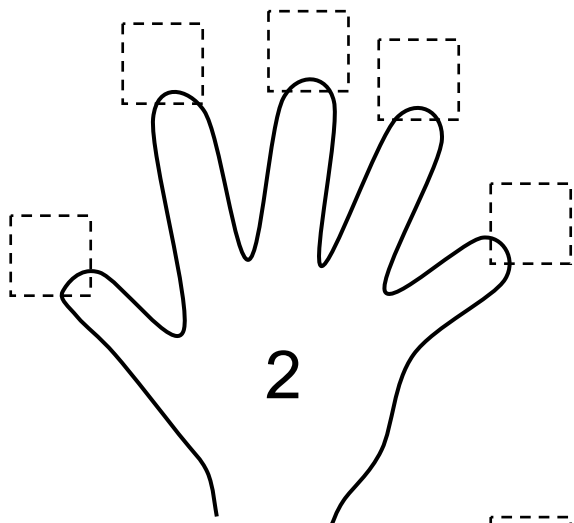
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Worksheet

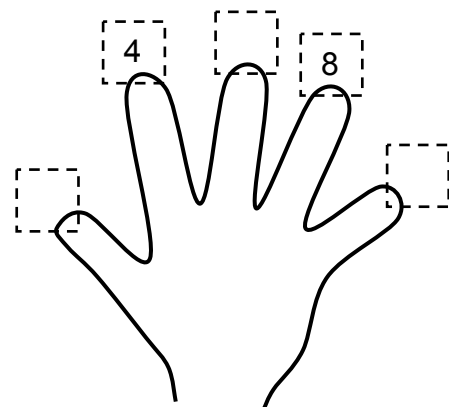
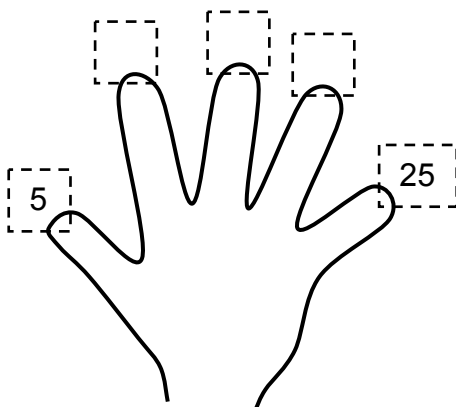
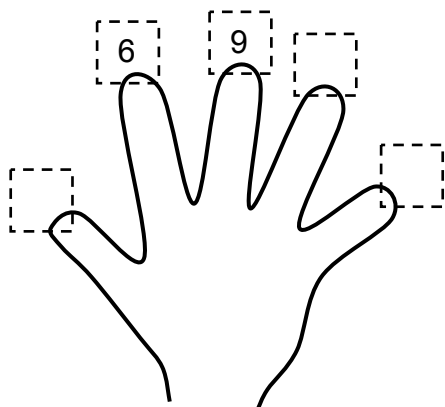
Counting by 2, 3 and 5

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 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.**

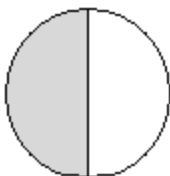
Worksheet

Exploring Fractions

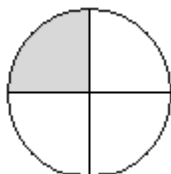
F-2

1. Name the following fractions

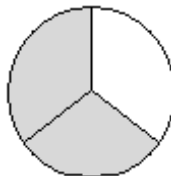
a)



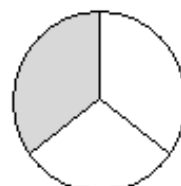
b)



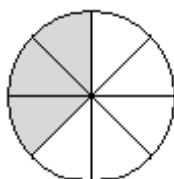
c)



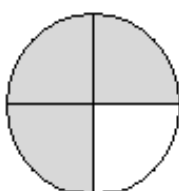
d)



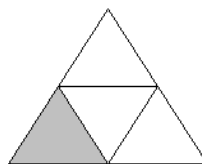
e)



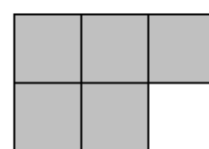
f)



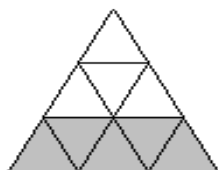
g)



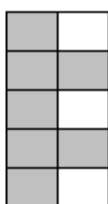
h)



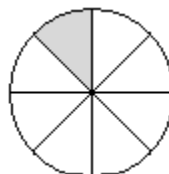
i)



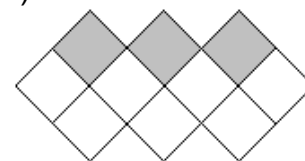
j)



k)

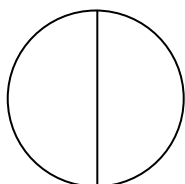


l)

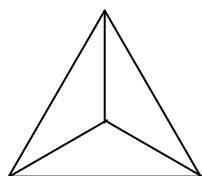


2. Shade the fractions named

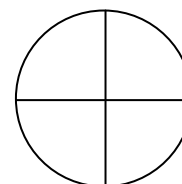
a) $\frac{1}{2}$



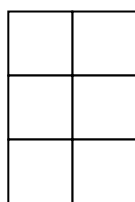
b) $\frac{1}{3}$



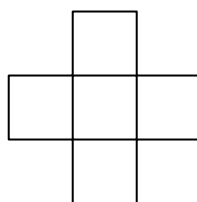
c) $\frac{3}{4}$



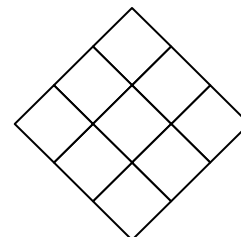
d) $\frac{3}{6}$



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

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

2. Switch the bottom numbers:

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

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

3. Write times signs and switch the numbers:

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

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

4. Perform the multiplications:

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

$\frac{3 \times 1}{3 \times 2} + \frac{1 \times 2}{3 \times 2}$ $= \frac{3}{6} + \frac{2}{6}$	$\frac{5 \times 1}{5 \times 2} + \frac{1 \times 2}{5 \times 2}$ $= \frac{5}{10} + \frac{2}{10}$	$\frac{5 \times 1}{5 \times 3} + \frac{1 \times 3}{5 \times 3}$ $= \frac{5}{15} + \frac{3}{15}$
--	--	--

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

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

5. Perform the additions:

Example: $\frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} \longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$
 $= \frac{3}{15} + \frac{5}{15} = \frac{8}{15}$

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

6. Perform the multiplications and the additions:

Example: $\frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} \longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5} \longrightarrow \frac{3 \times 1}{3 \times 5} + \frac{1 \times 5}{3 \times 5}$
 $= \text{---} + \text{---} = \frac{3}{15} + \frac{5}{15} = \frac{8}{15}$

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

Name: _____

Date: _____

page 8

Worksheet

Adding and Subtracting Fractions

F-4 A (con't)

7. Add

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

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

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

8. 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:

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

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

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

Name: _____

Date: _____

page 9

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 10

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:

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

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

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

Name: _____

Date: _____

page 13

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 lesser 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:

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

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

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

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

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

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

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

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 17

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. Add:

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

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

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

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

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

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

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

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

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 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:

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

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

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

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

Name: _____

Date: _____

page 22

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

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

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

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

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

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

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

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

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

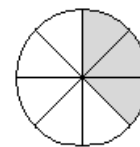
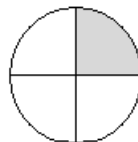
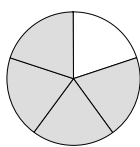
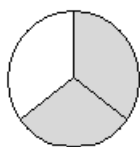
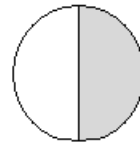
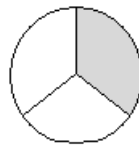
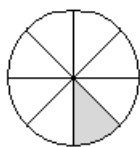
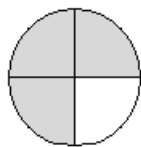
BONUS: Add, then reduce

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

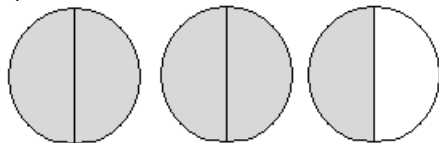
$$\frac{1}{3} + \frac{3}{12} + \frac{1}{4}$$

Worksheet**Naming Mixed & Improper Fractions (Warm Up)****F-10 A**

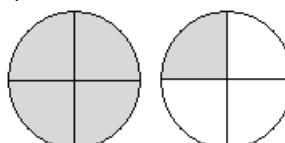
1. Name these fractions:

2. Write how many whole pies are shaded:

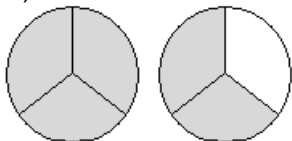
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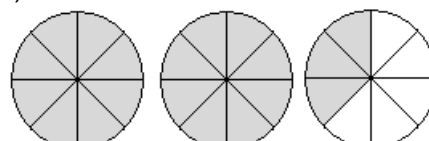
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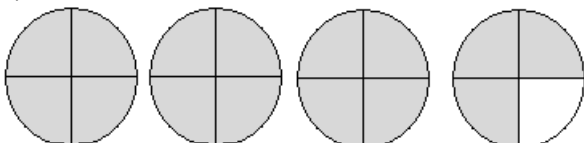
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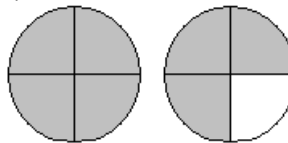
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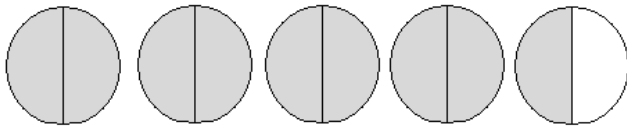
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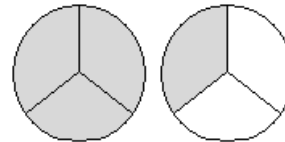
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g)



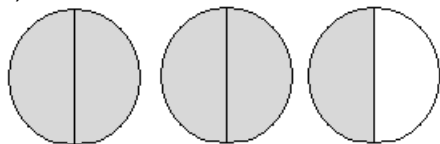
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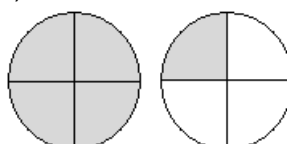
Worksheet**Naming Mixed & Improper Fractions****F-10 A (con't)**

3. Write these fractions as mixed fractions.

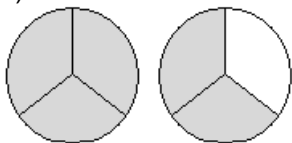
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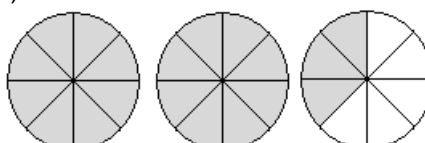
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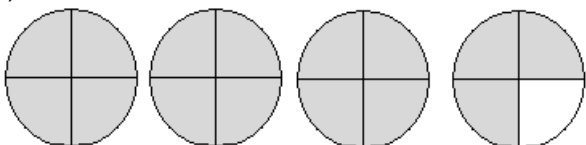
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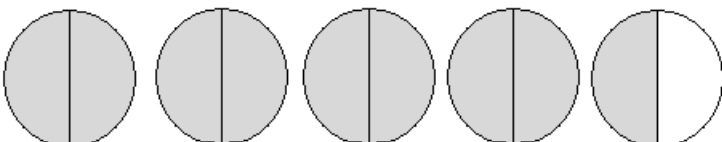
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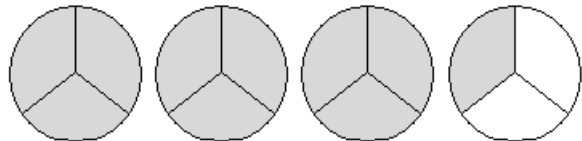
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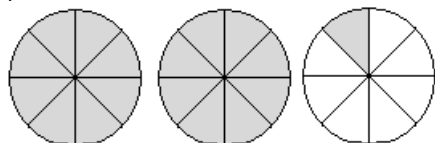
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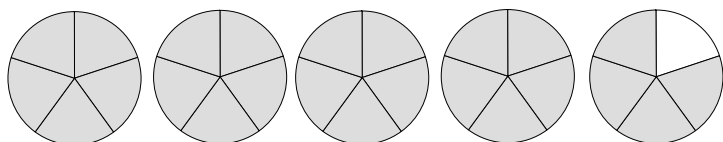
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h)



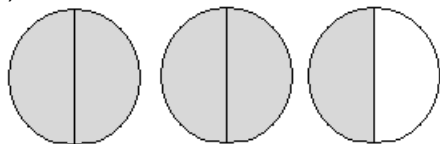
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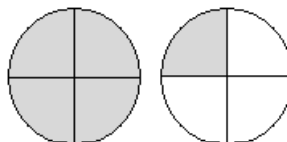
Worksheet**Naming Mixed & Improper Fractions****F-10 A (con't)**

4. Write these fractions as improper fractions.

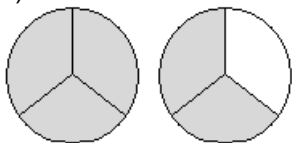
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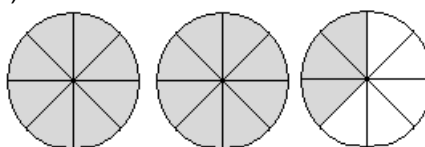
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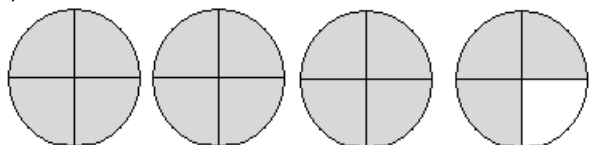
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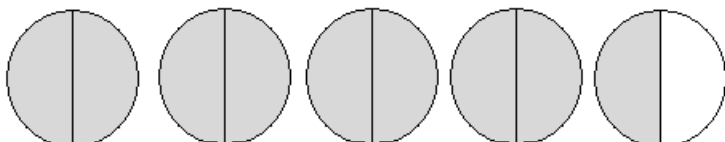
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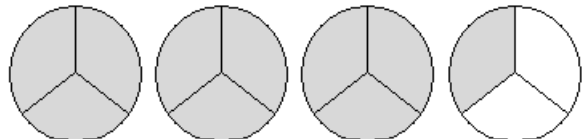
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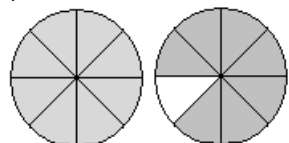
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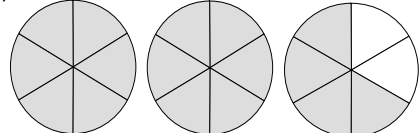
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i)

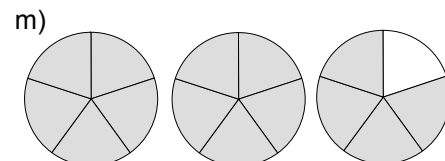
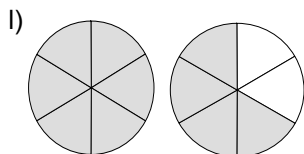
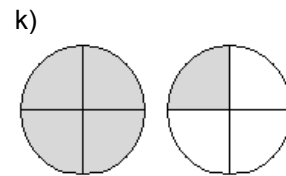
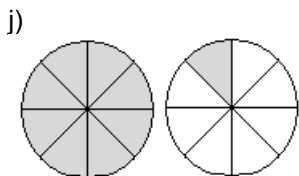
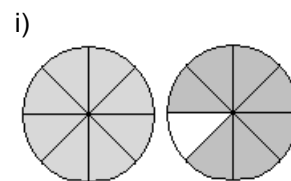
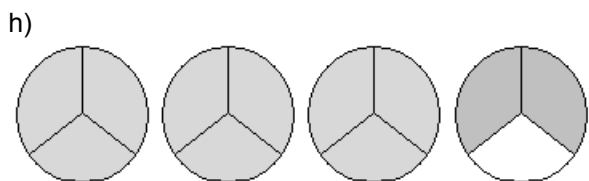
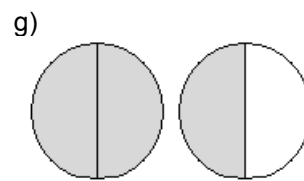
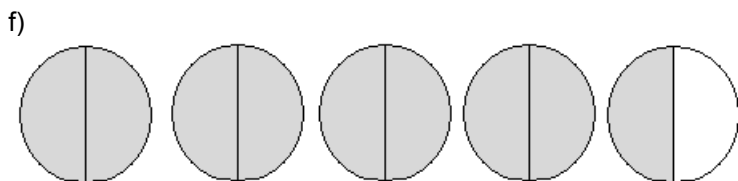
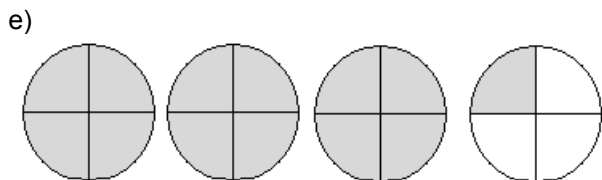
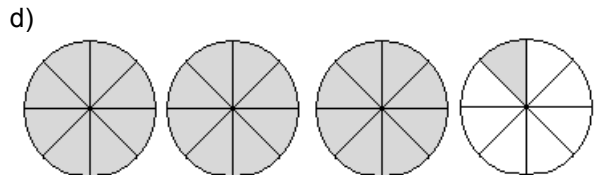
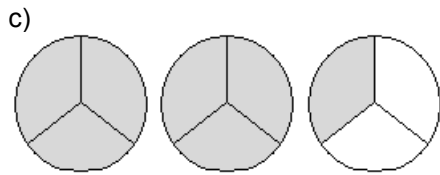
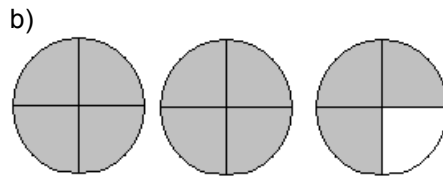
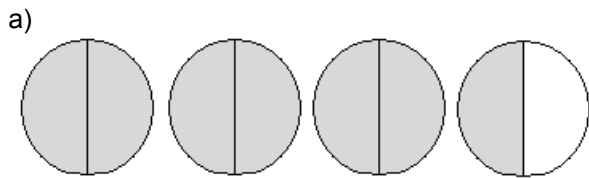


Worksheet

Mixed / Improper Fractions

F-10 B

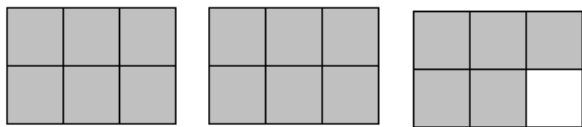
1. Write these fractions as mixed fractions and as improper fractions.



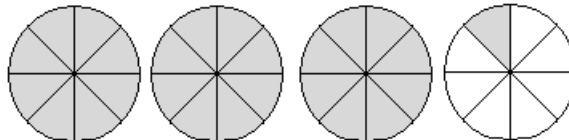
Worksheet**Mixed / Improper Fractions****F-10 B (con't)**

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

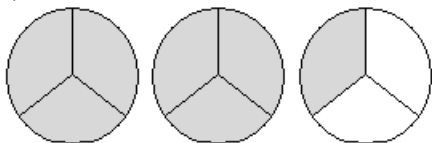
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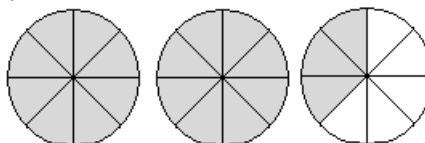
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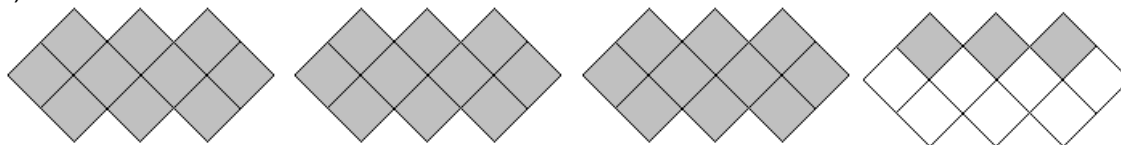
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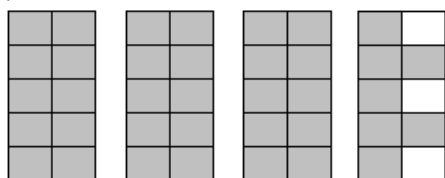
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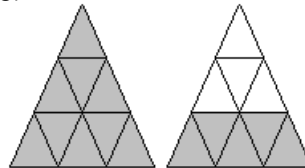
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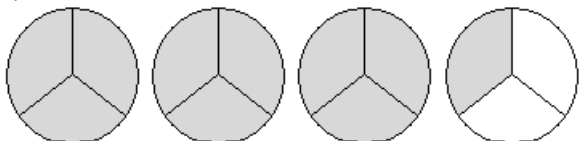
f)



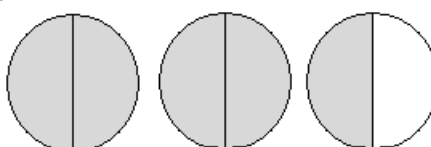
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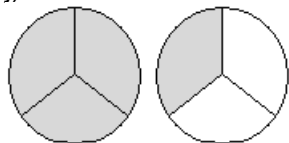
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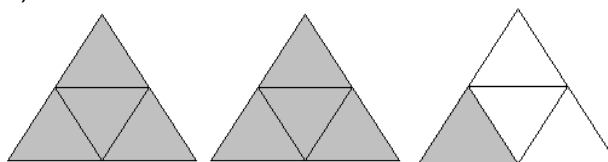
i)



j)

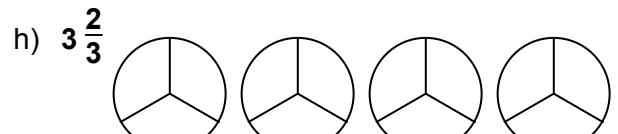
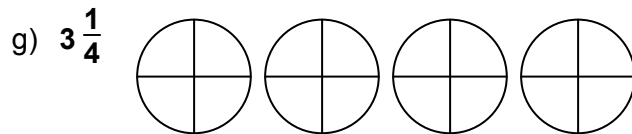
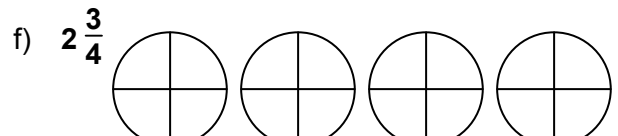
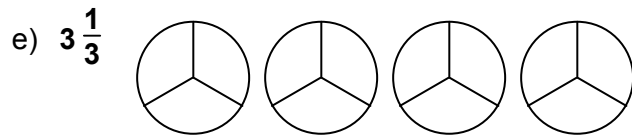
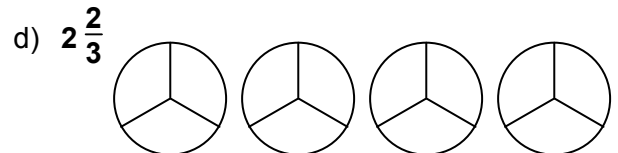
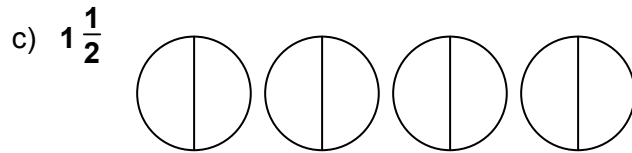
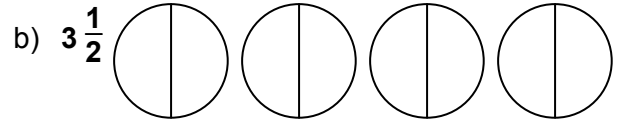
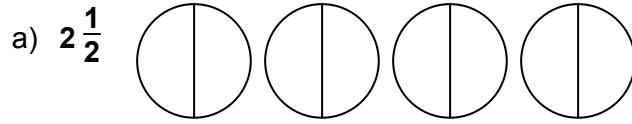


k)



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:**



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.

$2\frac{1}{4}$

$3\frac{1}{4}$

$2\frac{3}{4}$

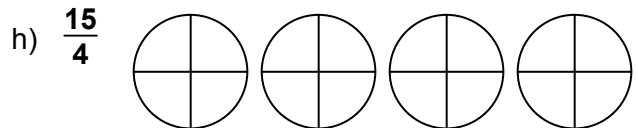
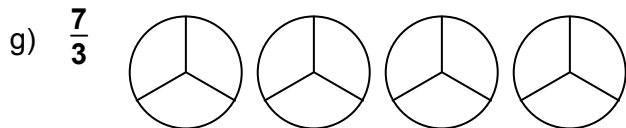
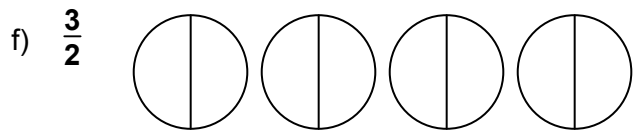
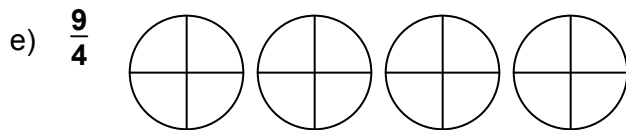
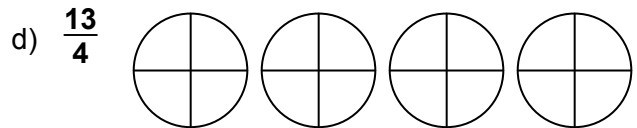
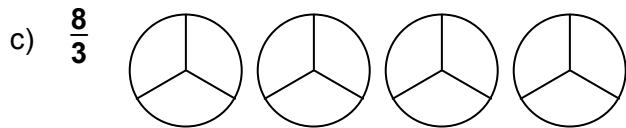
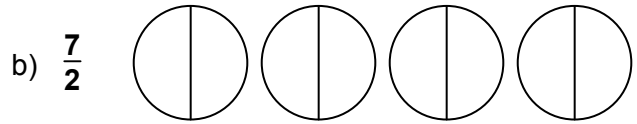
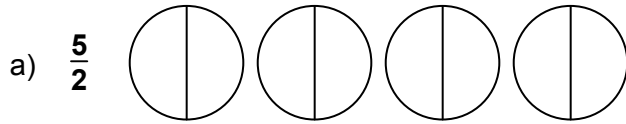
$1\frac{1}{3}$

$3\frac{1}{2}$

$3\frac{2}{3}$

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.

$\frac{5}{2}$

$\frac{9}{2}$

$\frac{7}{4}$

$\frac{9}{4}$

$\frac{5}{3}$

$\frac{11}{8}$

Worksheet**Mixed / Improper Fractions****F-11 A**

1. Change these mixed fractions to improper fractions.

$2\frac{1}{2} =$

$1\frac{1}{2} =$

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

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

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

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

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

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

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

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

$5\frac{1}{5} =$

$2\frac{4}{5} =$

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

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

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

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

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

$1\frac{1}{6} =$

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

$4\frac{3}{4} =$

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

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

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

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

BONUS:

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

$4\frac{2}{5} =$

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

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

$10\frac{3}{5} =$

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

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

$6\frac{2}{5} =$

Worksheet**Mixed / Improper Fractions****F-11 B**

1. Change these mixed fractions to improper fractions.

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

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

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

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

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

$6\frac{3}{7} =$

$9\frac{1}{2} =$

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

$5\frac{2}{7} =$

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

$4\frac{7}{9} =$

$3\frac{5}{8} =$

$7\frac{1}{4} =$

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

$6\frac{2}{7} =$

$8\frac{1}{6} =$

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

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

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

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

BONUS:

$5\frac{3}{8} =$

$7\frac{3}{7} =$

$9\frac{1}{8} =$

$8\frac{5}{12} =$

$8\frac{2}{7} =$

$6\frac{1}{9} =$

$5\frac{7}{9} =$

$12\frac{5}{8} =$

Name: _____

Date: _____

page 32

Worksheet

Mixed / Improper Fractions

F-12 A

1. Divide

$$2 \overline{) 5}$$

$$2 \overline{) 7}$$

$$2 \overline{) 9}$$

$$2 \overline{) 11}$$

$$3 \overline{) 5}$$

$$3 \overline{) 7}$$

$$3 \overline{) 11}$$

$$3 \overline{) 13}$$

$$3 \overline{) 16}$$

$$3 \overline{) 27}$$

$$5 \overline{) 21}$$

$$3 \overline{) 14}$$

$$2 \overline{) 5}$$

$$5 \overline{) 27}$$

$$4 \overline{) 5}$$

$$4 \overline{) 9}$$

$$4 \overline{) 17}$$

$$4 \overline{) 21}$$

$$4 \overline{) 11}$$

$$3 \overline{) 17}$$

Worksheet**Mixed / Improper Fractions****F-12 A (cont.)**

1. Change these improper fractions to mixed fractions

$$\frac{5}{2} =$$

$$\frac{9}{2} =$$

$$\frac{7}{3} =$$

$$\frac{11}{3} =$$

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

$$\frac{17}{5} =$$

$$\frac{8}{3} =$$

$$\frac{22}{5} =$$

$$\frac{13}{3} =$$

$$\frac{26}{5} =$$

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

$$\frac{21}{5} =$$

$$\frac{16}{3} =$$

$$\frac{11}{2} =$$

$$\frac{16}{5} =$$

$$\frac{13}{5} =$$

BONUS:

$$\frac{13}{2} =$$

$$\frac{31}{5} =$$

$$\frac{9}{4} =$$

$$\frac{13}{3} =$$

Worksheet**Mixed / Improper Fractions****F-12 A (cont.)**

1. Divide

$$2 \overline{) 15}$$

$$2 \overline{) 21}$$

$$3 \overline{) 22}$$

$$3 \overline{) 17}$$

$$4 \overline{) 15}$$

$$4 \overline{) 22}$$

$$4 \overline{) 25}$$

$$4 \overline{) 30}$$

2. Change these improper fractions to mixed fractions

$$\frac{27}{5} =$$

$$\frac{29}{4} =$$

$$\frac{17}{4} =$$

$$\frac{48}{5} =$$

$$\frac{32}{5} =$$

$$\frac{29}{5} =$$

BONUS:

$$\frac{19}{6} =$$

$$\frac{28}{9} =$$

$$\frac{15}{7} =$$

$$\frac{17}{8} =$$

Worksheet**Adding Mixed Fractions****F-13 A**

1. Add or Subtract (remember to change the mixed to improper first):

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

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

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

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

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

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

2. Check if one denominator goes into the other!

$$1\frac{1}{2} - 1\frac{1}{6} =$$

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

$$3\frac{1}{2} - \frac{3}{8} =$$

BONUS:

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

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

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

Worksheet**Adding Mixed Fractions****F-13 B**

1. Add

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

$$3\frac{1}{3} + 5\frac{1}{9} =$$

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

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

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

$$5\frac{1}{7} + 2\frac{4}{5} =$$

$$3\frac{1}{4} + 7\frac{1}{8} =$$

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

$$2\frac{1}{3} + 1\frac{4}{7} =$$

BONUS:

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

$$2\frac{1}{16} + 1\frac{2}{4} =$$

$$5\frac{1}{3} + 2\frac{4}{15} =$$

Worksheet**Comparing Fractions****F-14 A**

1. Circle the bigger fraction in each pair.

$\frac{1}{5}$

$\frac{3}{5}$

$\frac{5}{11}$

$\frac{2}{11}$

$\frac{3}{7}$

$\frac{1}{7}$

2. Make the denominators the same and then circle the bigger fraction.

$\frac{2}{3}$

$\frac{1}{2}$

$\frac{3}{4}$

$\frac{4}{5}$

$\frac{2}{3}$

$\frac{3}{4}$

$\frac{1}{3}$

$\frac{1}{2}$

$\frac{3}{4}$

$\frac{3}{5}$

$\frac{1}{2}$

$\frac{1}{5}$

3. Make the denominators the same and then circle the bigger fraction.
(HINT: Check if one denominator goes into the other!)

$\frac{1}{2}$

$\frac{7}{10}$

$\frac{2}{3}$

$\frac{5}{6}$

$\frac{4}{15}$

$\frac{1}{5}$

$\frac{1}{6}$

$\frac{2}{3}$

$\frac{3}{4}$

$\frac{5}{8}$

$\frac{2}{3}$

$\frac{4}{9}$

BONUS:

$\frac{1}{2}$

$\frac{3}{5}$

$\frac{3}{20}$

$\frac{4}{5}$

$\frac{2}{3}$

$\frac{5}{12}$

Worksheet**Advanced Fraction Problems****F-15 A**

1. Word problems (Make sure to finish with a statement.)

Anna ate $\frac{1}{2}$ of a pie and Samir ate $\frac{1}{3}$. How much pie did they eat altogether?
Tom ate $\frac{1}{3}$ of a pie and Marzuk ate $\frac{1}{5}$. How much pie did they eat?

Sally ate $\frac{1}{2}$ of a pie and Samantha ate $\frac{2}{5}$. How much pie did they eat?
Jessica ate $\frac{3}{8}$ of a pizza and Aram ate $\frac{1}{4}$. How much pizza did they eat?

Worksheet**Advanced Fraction Problems****F-15 B**

1. Word problems (Make sure to finish with a statement.)

Eshi ate $\frac{1}{4}$ of a pizza and Sadia ate $\frac{1}{5}$. How much pizza did they eat? Karen ate $\frac{2}{9}$ of a pie and Vu ate $\frac{1}{3}$.
How much pie did they eat?

Hugues ate $\frac{2}{3}$ of a pie and Barbie ate $\frac{1}{6}$.
How much pie did they eat?

Al ate $\frac{5}{8}$ of a pie and Jin ate $\frac{1}{16}$.
How much pie did they eat?

BONUS:

Thenigan ate $\frac{1}{3}$ of a pie, Jennifer ate $\frac{1}{2}$, and Abal ate $\frac{1}{6}$. How much pie did they eat altogether? Tobasum ate $\frac{1}{8}$ of a pizza, Amir ate $\frac{1}{4}$, and Tommy ate $\frac{1}{2}$. How much pizza did they eat altogether?

Worksheet**Review (Sections F13-F15)****F-13-15 A**

1. Add or Subtract

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

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

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

2. Circle the bigger fraction in each pair.

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

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

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

3. Write < or > to show which fraction is bigger. (Show your work!)

$$\frac{7}{17} \quad \frac{9}{17}$$

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

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

$$\frac{4}{5} \quad \frac{7}{10}$$

4. Advanced word problems (Make sure to finish with a statement.)

Serge ate $\frac{2}{3}$ of a pie and Gita ate $\frac{1}{2}$.

How much pie did they eat?

Was it more than one pie?

Sally ate $\frac{2}{3}$ of a pizza, Alex ate $\frac{1}{2}$ and Zaki

ate $\frac{1}{6}$. How much pizza did they eat? Was it

more than one pizza?

