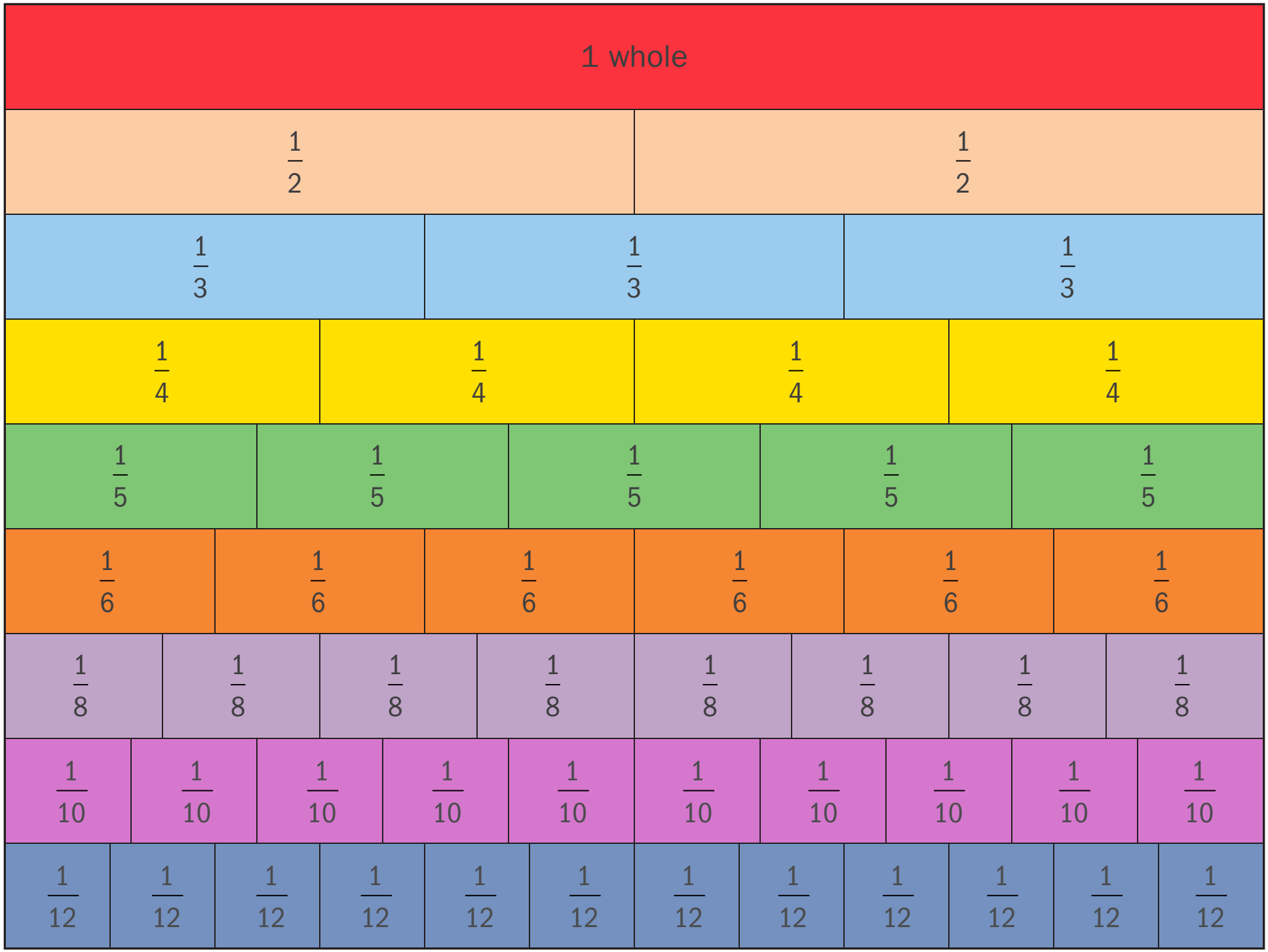
5. Supplemental Materials

a. Fractions Tiles
b. Fraction Circles
c. Fraction Addition Flash Cards
d. Fraction Subtraction Flash Cards
e. Fraction Cards
f. Multiplication Chart
g. Improper Fraction Cards
h. Mixed Number Cards
i. Prompt Cards for Converting Improper Fractions and Mixed Numbers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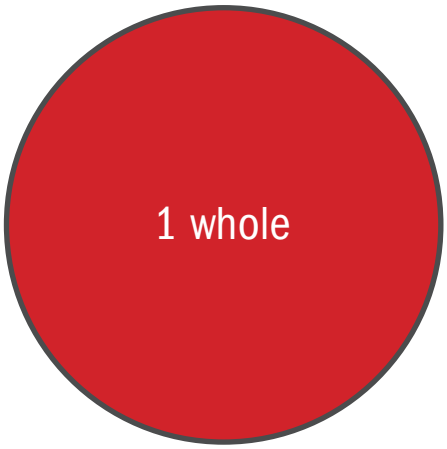
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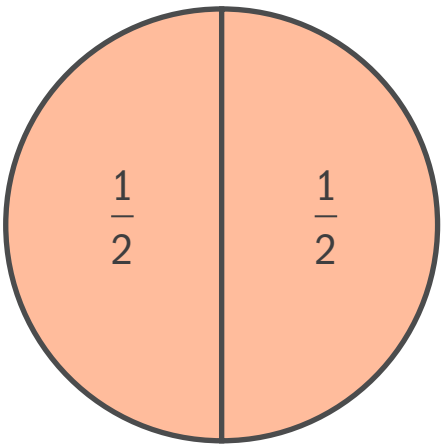
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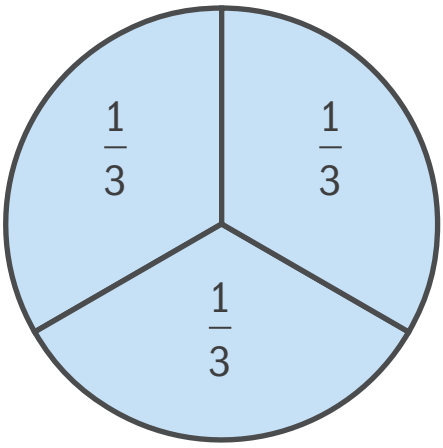
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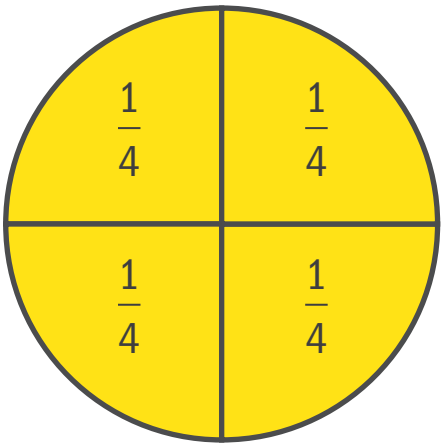
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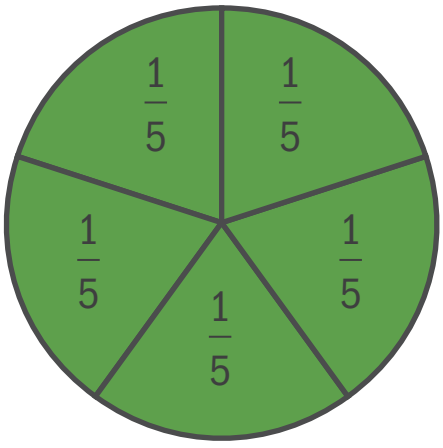
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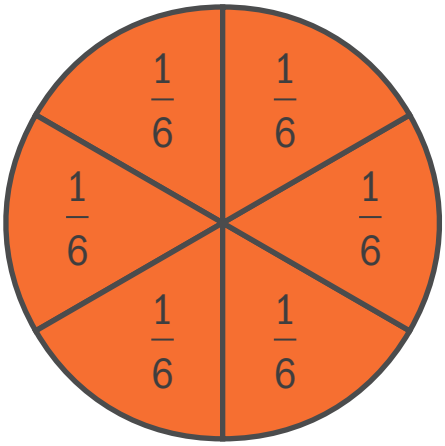
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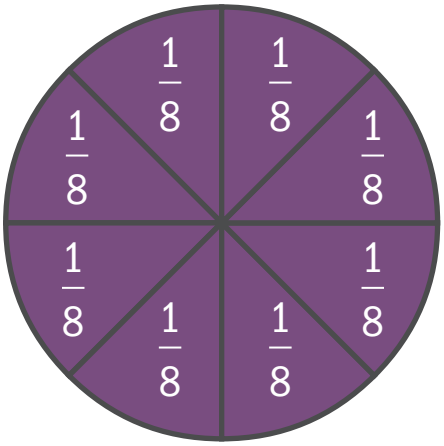
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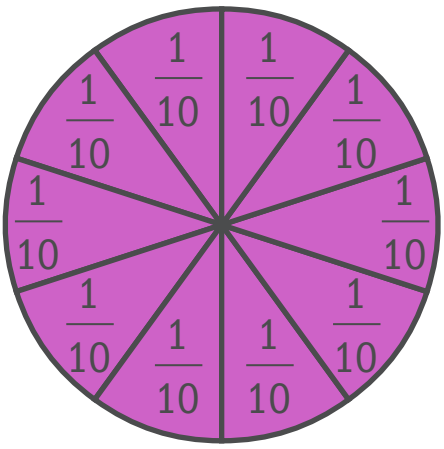
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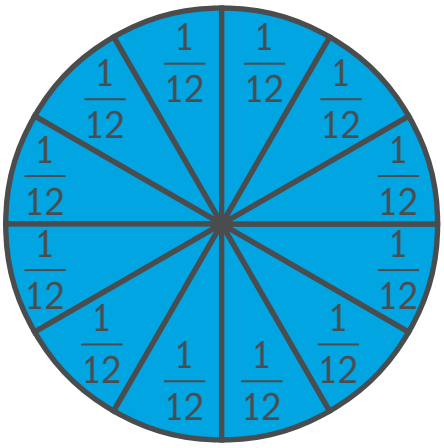
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$\frac{1}{2} + \frac{1}{2}$

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

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

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

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

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

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

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

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

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

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

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

$\frac{5}{6} + \frac{0}{6}$

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

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

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

$\frac{0}{8} + \frac{7}{8}$

$\frac{4}{6}$	$\frac{3}{6}$
$\frac{5}{6}$	$\frac{5}{6}$
$\frac{5}{8}$	$\frac{7}{8}$
$\frac{7}{8}$	$\frac{8}{8} = 1$

$\frac{2}{10} + \frac{6}{10}$

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

$\frac{4}{10} + \frac{5}{10}$

$\frac{7}{10} + \frac{3}{10}$

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

$\frac{7}{12} + \frac{5}{12}$

$\frac{1}{12} + \frac{6}{12}$

$\frac{10}{12} + \frac{0}{12}$

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$\frac{4}{10}$	$\frac{8}{10}$
$\frac{10}{10} = 1$	$\frac{9}{10}$
$\frac{12}{12} = 1$	$\frac{8}{12}$
$\frac{10}{12}$	$\frac{7}{12}$

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

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

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

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

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

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

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

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

$\frac{2}{3}$	$\frac{1}{2}$
$\frac{1}{4}$	$\frac{1}{3}$
$\frac{3}{5}$	$\frac{1}{4}$
$\frac{4}{6}$	$\frac{2}{5}$

$\frac{5}{6} - \frac{1}{6}$	$\frac{3}{6} - \frac{1}{6}$
$\frac{7}{8} - \frac{2}{8}$	$\frac{8}{8} - \frac{6}{8}$
$\frac{5}{8} - \frac{5}{8}$	$\frac{6}{8} - \frac{1}{8}$
$\frac{10}{10} - \frac{3}{10}$	$\frac{10}{10} - \frac{8}{10}$

$\frac{2}{6}$	$\frac{4}{6}$
$\frac{2}{8}$	$\frac{5}{8}$
$\frac{5}{8}$	$\frac{0}{8} = 0$
$\frac{2}{10}$	$\frac{7}{10}$

$\frac{7}{10} - \frac{2}{10}$

$\frac{8}{10} - \frac{6}{10}$

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

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

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

$\frac{8}{12} - \frac{6}{12}$

$\frac{5}{12} - \frac{2}{12}$

$\frac{11}{12} - \frac{6}{12}$

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$\frac{2}{10}$	$\frac{5}{10}$
$\frac{11}{12}$	$\frac{8}{10}$
$\frac{2}{12}$	$\frac{9}{12}$
$\frac{5}{12}$	$\frac{3}{12}$

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

$\frac{4}{4}$	$\frac{1}{5}$
$\frac{2}{5}$	$\frac{3}{5}$
$\frac{4}{5}$	$\frac{5}{5}$
$\frac{1}{6}$	$\frac{2}{6}$

$\frac{3}{6}$	$\frac{4}{6}$
$\frac{5}{6}$	$\frac{6}{6}$
$\frac{1}{8}$	$\frac{2}{8}$
$\frac{3}{8}$	$\frac{4}{8}$

$\frac{5}{8}$	$\frac{6}{8}$
$\frac{7}{8}$	$\frac{8}{8}$
$\frac{1}{10}$	$\frac{2}{10}$
$\frac{3}{10}$	$\frac{4}{10}$

$\frac{5}{10}$	$\frac{6}{10}$
$\frac{7}{10}$	$\frac{8}{10}$
$\frac{9}{10}$	$\frac{10}{10}$
$\frac{1}{12}$	$\frac{2}{12}$

$\frac{3}{12}$	$\frac{4}{12}$
$\frac{5}{12}$	$\frac{6}{12}$
$\frac{7}{12}$	$\frac{8}{12}$
$\frac{9}{12}$	$\frac{10}{12}$

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	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

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$\frac{5}{4}$	$\frac{3}{1}$
$\frac{4}{1}$	$\frac{6}{1}$
$\frac{9}{1}$	$\frac{13}{1}$
$\frac{20}{1}$	$\frac{2}{1}$

$\frac{3}{2}$	$\frac{4}{2}$
$\frac{5}{2}$	$\frac{7}{2}$
$\frac{4}{3}$	$\frac{6}{3}$
$\frac{7}{3}$	$\frac{15}{3}$

$\frac{5}{4}$	$\frac{7}{4}$
$\frac{11}{4}$	$\frac{16}{4}$
$\frac{6}{5}$	$\frac{7}{5}$
$\frac{10}{5}$	$\frac{12}{5}$

$\frac{7}{6}$	$\frac{10}{6}$
$\frac{11}{6}$	$\frac{18}{6}$
$\frac{8}{7}$	$\frac{10}{7}$
$\frac{14}{7}$	$\frac{17}{7}$

$\frac{9}{8}$	$\frac{10}{8}$
$\frac{16}{8}$	$\frac{19}{8}$
$\frac{11}{10}$	$\frac{13}{10}$
$\frac{16}{10}$	$\frac{20}{10}$

$\frac{13}{12}$	$\frac{15}{12}$
$\frac{20}{12}$	$\frac{24}{12}$

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

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

$1\frac{1}{5}$	$1\frac{4}{5}$
$1\frac{3}{5}$	$4\frac{1}{5}$
$1\frac{1}{6}$	$1\frac{4}{6}$
$1\frac{5}{6}$	$2\frac{3}{6}$

$1\frac{1}{7}$	$1\frac{4}{7}$
$1\frac{5}{7}$	$3\frac{2}{7}$
$1\frac{1}{8}$	$1\frac{3}{8}$
$1\frac{7}{8}$	$2\frac{3}{8}$

$5\frac{2}{3}$

$4\frac{3}{4}$

$3\frac{2}{5}$

$6\frac{2}{6}$

$2\frac{6}{7}$

$3\frac{6}{8}$

$2\frac{1}{9}$

$3\frac{3}{10}$

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Converting an Improper Fraction to a Mixed Number Using Subtraction (when the improper fraction is less than 2)

Step	Example
Start with an **improper fraction.**	$\frac{8}{5}$
Subtract a fraction equal to 1 from the **improper fraction.** Make sure the **denominators** are the same.	$\frac{8}{5} - \frac{5}{5} = \frac{3}{5}$
The **mixed number** is equal to 1 and the new **proper fraction.**	$\frac{8}{5} = 1\frac{3}{5}$

Converting a Mixed Number to an Improper Fraction Using Addition (when the mixed number is less than 2)

Step	Example
Start with a **mixed number.**	$1\frac{3}{5}$
Change the 1 in the **mixed number** to a fraction with the same **denominator.**	$1 = \frac{5}{5}$
Add the fraction equal to 1 to the **proper fraction** to get the **improper fraction.**	$\frac{5}{5} + \frac{3}{5} = \frac{8}{5}$

Converting an Improper Fraction to a Mixed Number Using Subtraction (when the improper fraction is greater than 2)

Step	Example
Start with an **improper fraction.**	$\frac{16}{5}$
Subtract a fraction equal to 1 from the **improper fraction.** Make sure the **denominators** are the same.	$\frac{16}{5} - \frac{5}{5} = \frac{11}{5}$
Check to see if the new fraction is a **proper fraction** or an **improper fraction.**	$\frac{11}{5}$ is an improper fraction.
If the new number is still an **improper fraction,** repeat the previous steps. Continue until the new fraction is a **proper fraction.**	$\frac{11}{5} - \frac{5}{5} = \frac{6}{5}$ $\frac{6}{5}$ is an improper fraction. $\frac{6}{5} - \frac{5}{5} = \frac{1}{5}$ $\frac{1}{5}$ is a proper fraction.
Count how many times a fraction equal to one was subtracted from an **improper fraction.** That will be the **whole number** in the new **mixed number.**	$\frac{5}{5}$ was subtracted from an improper fraction **three** times, so the whole number is 3.
The new **mixed number** equals the **whole number** combined with the new **proper fraction.**	$\frac{16}{5} = 3\frac{1}{5}$

Converting a Mixed Number to an Improper Fraction Using Addition (when the mixed number is greater than 2)

Step	Example
Start with a **mixed number.**	$3\frac{1}{4}$
Change the **whole number** part of the **mixed number** to fractions equal to 1 with the same **denominator** as the **proper fraction** part of the **mixed number.**	$3 = 1 + 1 + 1 = \frac{4}{4} + \frac{4}{4} + \frac{4}{4}$
Add the fractions equal to one together.	$\frac{4}{4} + \frac{4}{4} + \frac{4}{4} = \frac{12}{4}$
Add to that sum the proper fraction part of the **mixed number** to get your new **improper fraction.**	$\frac{12}{4} + \frac{1}{4} = \frac{13}{4}$

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