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Modified In-School Off-School Approach Modules (MISOSA)  
**Distance Education for Elementary Schools**  
**SELF-INSTRUCTIONAL MATERIALS**



**CHANGING IMPROPER  
FRACTIONS TO MIXED  
NUMBERS AND VICE VERSA**



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## CHANGING IMPROPER FRACTIONS TO MIXED NUMBERS AND VICE VERSA

**Objective:** Change improper fractions to mixed forms and vice versa.



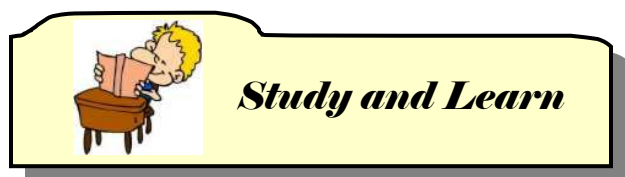
A. Write if the given fraction is proper, improper or a mixed form.

1)  $\frac{2}{3}$     2)  $\frac{13}{10}$     3)  $\frac{4}{10}$     4)  $\frac{2}{7}$     5)  $\frac{15}{7}$     6)  $\frac{15}{7}$     7)  $\frac{8}{21}$

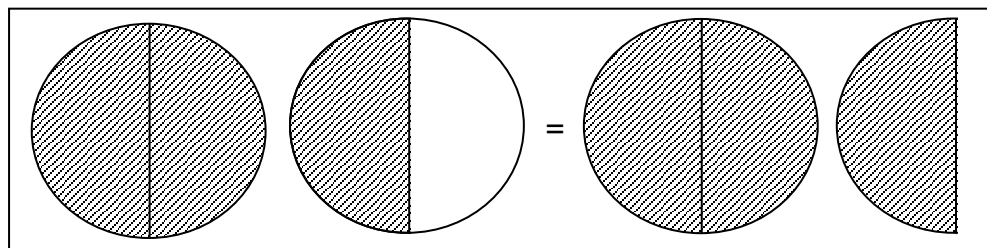
8)  $\frac{81}{100}$     9)  $\frac{50}{27}$     10)  $6\frac{3}{7}$     11)  $\frac{6}{11}$     12)  $\frac{8}{19}$     13)  $5\frac{3}{10}$

14)  $2\frac{1}{10}$     15)  $\frac{15}{7}$

*Check your answer using the answer key. If your score is 12 to 15, you may now proceed to this module. If you get 11 correct answers or below, review the lesson on identifying proper, improper fraction or mixed form.*



A. Study these diagrams

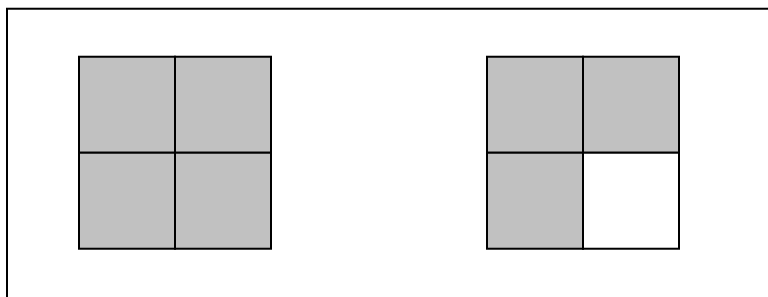


$$\frac{3}{2} = 2\frac{1}{2} = 2\frac{1}{2} = 1\frac{1}{2}$$



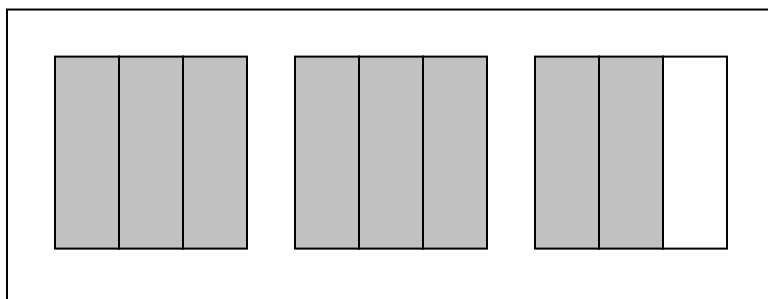


$$\frac{3}{2} = 1\frac{1}{2}$$



$$\frac{7}{4} = 4\overline{)1} = 1\frac{3}{4}$$
$$\quad \quad \quad \underline{-4}$$
$$\quad \quad \quad \quad 3$$

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



$$\frac{8}{3} = 3\overline{)2} = 2\frac{2}{3}$$
$$\quad \quad \quad \underline{-6}$$
$$\quad \quad \quad \quad 2$$

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

B. Here is another set of fractions

$$1\frac{3}{7}, \quad 3\frac{4}{7}, \quad 2\frac{4}{5}$$

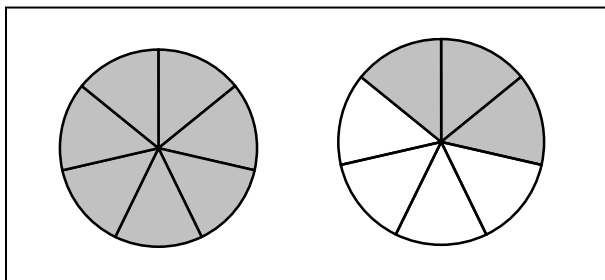
**These fractions are called mixed numbers and can be renamed as improper fractions.**





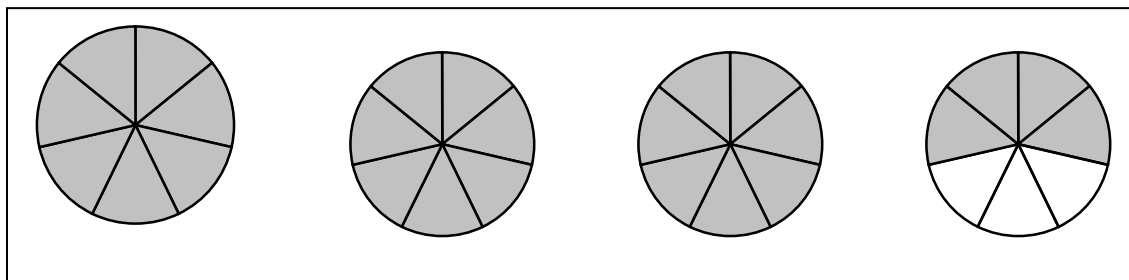
Try to observe how it is done.

$$a) \quad 1 \frac{3}{7} = \frac{1 \times 7 + 3}{7} = \frac{7 + 3}{7} = \frac{10}{7}$$



$$1 \frac{3}{7} = \frac{10}{7}$$

$$b) \quad 3 \frac{4}{7} = \frac{3 \times 7 + 4}{7} = \frac{21 + 4}{7} = \frac{25}{7}$$

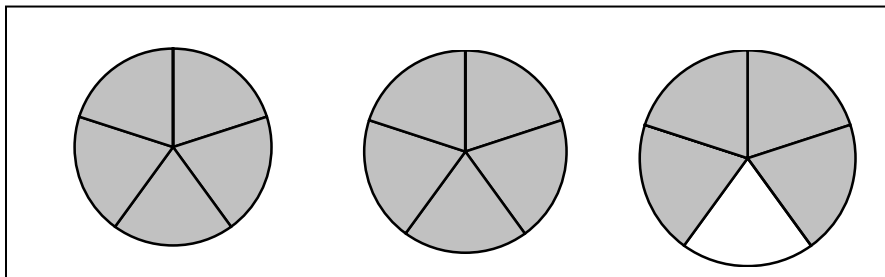


$$3 \frac{4}{7} = \frac{25}{7}$$





$$c) \quad 2\frac{4}{5} = \frac{2 \times 5 + 4}{5} = \frac{10 + 4}{5} = \frac{14}{5}$$



$$2\frac{4}{5} = \frac{14}{5}$$

C. Read this problem

Aling Betty had sewn the gown which her daughter wore during the Flores de Mayo. Aling Betty used  $\frac{5}{2}$  metres of cloth. How many metres of cloth did she use?

Solve it by using an illustration

$$\left[ \left( \frac{1}{2} \right) + \left( \frac{1}{2} \right) \right] + \left[ \left( \frac{1}{2} \right) + \left( \frac{1}{2} \right) \right] \left( \frac{1}{2} \right) = \frac{5}{2}$$
$$= 2\frac{1}{2}$$

1. How many metres of cloth did Aling Betty use?

2. What kind of fraction is  $\frac{5}{2}$  ?

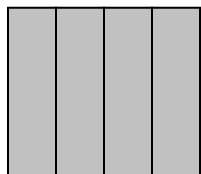




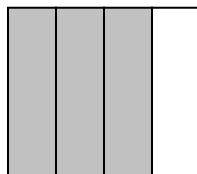
3. How will you change  $\frac{5}{2}$  to a mixed number?
4. If you change  $\frac{5}{2}$  to a mixed number what will it be?
5. What can you say about Aling Betty?  
What kind of mother is she?

c. Try this exercise.

Change  $1\frac{3}{4}$  to an improper fraction using the illustration below.



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



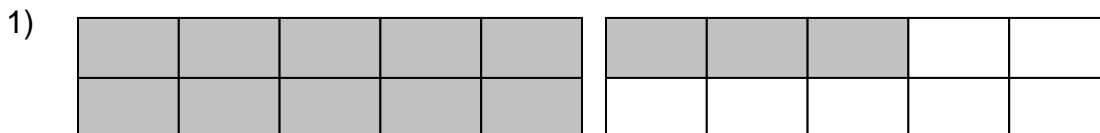
$$\frac{3}{4}$$

- a. What is the fraction name for 1?
- b. How many fourths do we have in all?
- c. What is the improper fraction for  $1\frac{3}{4}$ ?
- d. What process did you use?

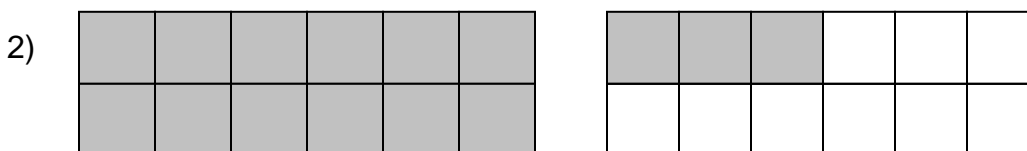




A. Do the following on your paper.  
Write the improper fraction and mixed form for each exercise.



$$\frac{10}{10} \text{ and } \frac{3}{10}$$



$$\frac{12}{12} \text{ and } \frac{3}{12}$$

B. Change each mixed number to improper fractions.

1)  $13\frac{1}{2}$       2)  $7\frac{5}{6}$       3)  $4\frac{3}{5}$       4)  $1\frac{2}{7}$       5)  $7\frac{1}{4}$

C. Change each improper fraction to a mixed number.

1)  $\frac{13}{6}$       2)  $\frac{24}{7}$       3)  $\frac{31}{6}$       4)  $\frac{21}{6}$       5)  $\frac{44}{8}$

D. Solve the following problems.

1. June has  $\frac{8}{3}$  litres of gasoline. What is the mixed form of  $\frac{8}{3}$ ?







2. Ruth bought  $2\frac{3}{4}$  metres of linen for a tablecloth. Change  $2\frac{3}{4}$  into an improper fraction?



### *Wrap Up*

1. To change an **improper fraction** to a **mixed number**, divide the numerator by the denominator. The quotient becomes the whole number part and the remainder becomes the numerator and the divisor becomes the denominator of the fraction part.
2. To change a **mixed fraction** to an **improper fraction**, multiply the whole number by the denominator. Add the product to the numerator to get the numerator of improper fraction.



### *On Your Own*

A. Change these mixed numbers to improper fractions. Do them on your paper.

1)  $4\frac{5}{6}$  \_\_\_\_\_

2)  $9\frac{2}{5}$  \_\_\_\_\_

3)  $3\frac{2}{7}$  \_\_\_\_\_

4)  $7\frac{6}{7}$  \_\_\_\_\_

5)  $9\frac{7}{8}$  \_\_\_\_\_





B. Change to mixed form.

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

7)  $\frac{15}{4}$

8)  $\frac{16}{5}$

9)  $\frac{11}{5}$

10)  $\frac{21}{4}$

*Check your answer with the answer key.*

*If you get 8 to 10 correct answers, you have mastered the skills in this module and you may proceed to the next.*

*If you get 5 to 7 correct answers, review the processes you missed.*

*If you get 4 correct answers or below, repeat the whole process.*

