MATHEMATICS 5

Modified In-School Off-School Approach Modules (MISOSA)

Distance Education for Elementary Schools

SELF-INSTRUCTIONAL MATERIALS

ADDITION OF MIXED FORMS

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ADDITION OF MIXED FORMS

Objective: Add mixed forms

Review

Find the sum.

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

2) $4\frac{3}{5} + \frac{3}{8}$

3) $6\frac{1}{4} + \frac{3}{7}$

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

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

a. $4\frac{39}{40}$

b. $4\frac{1}{3}$

c. $1\frac{13}{15}$

d. $3\frac{3}{20}$

e. $6\frac{19}{28}$

Study and Learn

You have already learned how to add a mixed number and a simple fraction with a different denominator. This time you will learn how to add mixed numbers.

Let's read the story problem below.

Cindy helps her mother sell different kinds of nuts on Saturdays. Last Saturday, they were able to sell:

$12\frac{3}{4}$ kilograms of peanuts

$8\frac{8}{10}$ kilograms of cashew nuts

$4\frac{1}{2}$ kilograms of pili nuts

$3\frac{1}{5}$ kilograms of almonds

What does Cindy do on Saturday?

Knowing that this is what she does on Saturdays, how can you describe the kind of girl that she is?

What things do you do that make you similar to Cindy?

How many kilos of peanuts and pili nuts were Cindy and her mother able to sell?

What is the correct number sentence?

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

Let's solve this step by step.

STEP 1	**Change the fractional parts to similar fractions using the Least Common Denominator (LCD)**	$12\frac{3}{4} = 12\frac{3}{4}$ $+\ 4\frac{1}{2} = +\ 4\frac{2}{4}$
STEP 2	**Add the fractions, then the whole numbers.**	$12\frac{3}{4}$ $+\ 4\frac{2}{4}$ $16\frac{5}{4}$
STEP 3	**Change the improper fraction in the answer to mixed form.** **Add this to the whole number.** **Reduce the answer to its lowest term if necessary.**	$\frac{5}{4} = 1\frac{1}{4}$ $16 + 1\frac{1}{4} = 17\frac{1}{4}$

So, $12\frac{3}{4} + 4\frac{1}{2} = 17\frac{1}{4}$

Therefore, Cindy and her mother were able to sell $17\frac{1}{4}$ *kilograms of peanuts and pili nuts.*

Were you able to follow the steps?

This time, let's try to find out how many kilograms of nuts they were able to sell last Saturday.

Since we already have the number of kilograms of peanuts and pili nuts just add this to the number of kilograms of almonds and cashew nuts sold. What would be our number sentence this time?

$17\frac{1}{4} + 8\frac{7}{10} + 3\frac{1}{5} = n$

Let's solve.

STEP 1

$17\frac{1}{4} = 17\frac{5}{20}$

The LCD of 4, 5 and 10 is 20.

$8\frac{8}{10} = 8\frac{16}{20}$

$+\ 3\frac{1}{5} = 3\frac{4}{20}$

The answer contains an improper fraction.

STEP 2

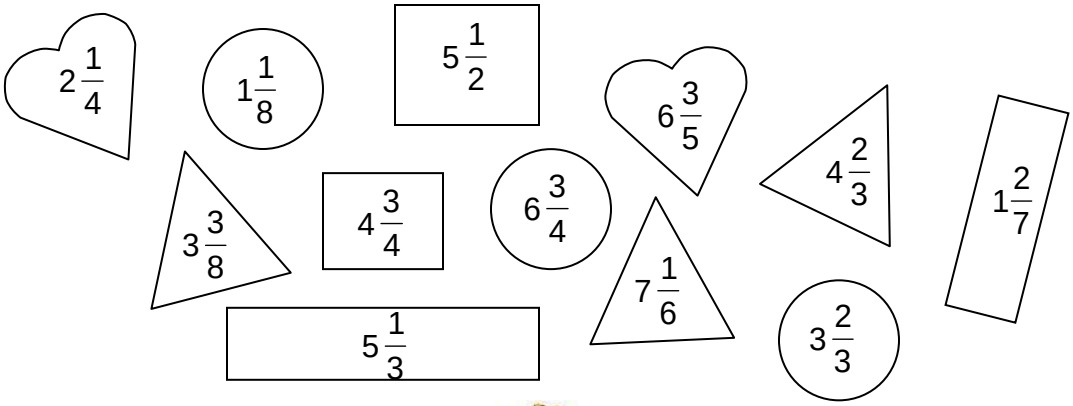
$28\frac{25}{20}$

STEP 3

$\frac{25}{20} = 1\frac{5}{20}$

$28 + 1\frac{5}{20} = 29\frac{5}{20} = 29\frac{1}{4}$

A. Add the mixed forms that are in the same shape. Simplify your answer.



Wrap Up

In adding mixed forms:

- Change the fractional parts to similar fractions.
- Add the fractions, then the whole numbers.
- If the fractional part of the answer is an improper fraction, change it to a proper fraction and add this to the whole number.
- Reduce the answer to its lowest terms if necessary.

On Your Own

Add the mixed forms in each of the following:

1) $4\frac{1}{5}+2\frac{3}{4}$
2) $10\frac{2}{3}+2\frac{5}{6}+3\frac{1}{4}$
3) $3\frac{4}{11}+2\frac{1}{2}$
4) $8\frac{1}{5}+2\frac{4}{15}$
5) $5\frac{6}{25}+2\frac{4}{5}+4\frac{1}{4}$

Key to Correction
ADDITION OF MIXED FORMS

REVIEW

1) c
2) a
3) e
4) b
5) d

TRY THESE

$8\frac{17}{20}$

$15\frac{5}{24}$

$11\frac{13}{24}$

$10\frac{1}{4}$

$6\frac{13}{21}$

ON YOUR OWN

1) $6\frac{9}{20}$
2) $16\frac{3}{4}$
3) $5\frac{19}{22}$
4) $10\frac{7}{15}$
5) $12\frac{29}{100}$