

## Lesson: Adding and Subtracting Mixed Numbers

### Lesson Topic: Add mixed numbers with unlike denominators

#### Question 1:

Add:

$$3 \frac{1}{6} + 2 \frac{7}{12} = \boxed{\phantom{000}}$$

#### Question 2:

Add:

$$4 \frac{1}{2} + 4 \frac{1}{4} = \boxed{\phantom{000}}$$

#### Question 3:

Add:

$$4 \frac{1}{5} + 2 \frac{3}{10} = \boxed{\phantom{000}}$$

#### Question 4:

Add:

$$1 \frac{1}{2} + 4 \frac{1}{4} = \boxed{\phantom{000}}$$

#### Question 5:

Add:

$$4 \frac{3}{4} + 1 \frac{1}{8} = \boxed{\phantom{000}}$$

#### Question 6:

Add:

$$2 \frac{1}{3} + 3 \frac{5}{6} = \boxed{\phantom{000}}$$

#### Question 7:

Add:

$$4 \frac{5}{7} + 1 \frac{9}{14} = \boxed{\phantom{000}}$$

#### Question 8:

Add:

$$2 \frac{3}{4} + 1 \frac{1}{8} = \boxed{\phantom{000}}$$

**Question 9:**

Add:

$$8 \frac{1}{3} + 3 \frac{5}{6} = \boxed{\phantom{000}}$$

**Question 10:**

Add:

$$3 \frac{5}{7} + 1 \frac{9}{14} = \boxed{\phantom{000}}$$

## Lesson Topic: Add mixed numbers with unlike denominators word problems

### Question 1:

A soccer player runs  $1\frac{5}{6}$  miles during the first half of a match and  $2\frac{1}{2}$  miles during the second half. How many miles does he run during the match in total?

miles

### Question 2:

Niki donated  $4\frac{5}{8}$  pounds of beans to the food drive and Annie donated  $3\frac{2}{3}$  pounds of beans to the food drive. Together, how much food did they donate?

pounds

### Question 3:

A fuel tank contains  $1\frac{3}{4}$  gallons of gasoline. Casey adds  $33\frac{1}{3}$  gallons of gasoline to the tank. How many gallons of gas does the tank now contain?

gallons

### Question 4:

Jane volunteered for two hours and fifteen minutes last week and five and a half hours this week. How many hours total did she volunteer during those two weeks?

hours

### Question 5:

Yesterday, Dustin biked  $4\frac{1}{2}$  miles, jogged  $2\frac{3}{4}$  miles, and swam  $3\frac{1}{8}$  miles. How many miles did he travel while exercising?

miles

### Question 6:

Ashley bought  $2\frac{1}{7}$  lb of tomatoes,  $3\frac{2}{3}$  lb of lettuce, and  $3\frac{1}{3}$  lb of spinach to make a salad. How many pounds of vegetables did she buy?

pounds

### Question 7:

Jack planted  $1\frac{1}{4}$  rows of lettuce in the family garden, Rose planted  $1\frac{1}{2}$  rows of broccoli and Calvin planted  $4\frac{5}{12}$  rows of beans. How many rows were planted in the garden?

rows

**Question 8:**

A refrigerator holds  $2\frac{1}{9}$  of a pound of oranges. Sherry adds  $4\frac{1}{2}$  pounds of oranges to the refrigerator. How many pounds of oranges does the refrigerator now hold?

**Question 9:**

Jordan bought  $1\frac{3}{5}$  pounds of vegetables and  $1\frac{1}{3}$  pounds of fruit. How many pounds of food did he buy in total?

 pounds**Question 10:**

David went to the lake and fished for  $1\frac{1}{2}$  hours and kayaked for  $4\frac{5}{6}$  hours. In total, how much time did he spend at the lake?

 hours

## Lesson Topic: Subtract mixed numbers with unlike denominators

### Question 1:

Subtract:

$$4 \frac{3}{10} - 2 \frac{23}{100} = \boxed{\phantom{000}}$$

### Question 2:

Subtract:

$$6 \frac{1}{2} - 4 \frac{1}{4} = \boxed{\phantom{000}}$$

### Question 3:

Subtract:

$$6 \frac{1}{3} - 4 \frac{5}{6} = \boxed{\phantom{000}}$$

### Question 4:

Subtract:

$$3 \frac{3}{10} - 2 \frac{23}{100} = \boxed{\phantom{000}}$$

### Question 5:

Subtract:

$$6 \frac{2}{5} - 3 \frac{7}{10} = \boxed{\phantom{000}}$$

### Question 6:

Subtract:

$$5 \frac{1}{2} - 4 \frac{1}{4} = \boxed{\phantom{000}}$$

### Question 7:

Subtract:

$$7 \frac{1}{6} - 3 \frac{5}{12} = \boxed{\phantom{000}}$$

### Question 8:

Subtract:

$$5 \frac{1}{3} - 4 \frac{5}{6} = \boxed{\phantom{000}}$$

**Question 9:**

Subtract:

$$9 \frac{1}{4} - 5 \frac{3}{8} = \boxed{\phantom{000}}$$

**Question 10:**

Subtract:

$$5 \frac{2}{5} - 3 \frac{7}{10} = \boxed{\phantom{000}}$$

## Lesson Topic: Subtract mixed numbers with unlike denominators word problems

### Question 1:

A farmer's truck is carrying  $4\frac{2}{3}$  tons of hay and straw. If  $3\frac{2}{5}$  tons of the load is hay, how much straw is the truck carrying?

tons

### Question 2:

The book, *Moby Dick*, is  $654\frac{1}{2}$  pages long. If Cheyenne has read  $432\frac{1}{8}$  pages of the book, how many more pages does she have left to read?

pages

### Question 3:

From Mason's house, it takes  $10\frac{1}{2}$  hours to drive to Los Angeles. If Mason has already driven for  $7\frac{1}{4}$  hours, how many hours remain until he reaches Los Angeles?

hours

### Question 4:

Evan bought  $2\frac{5}{9}$  pounds of lemon, and used  $1\frac{4}{5}$  pounds of them to make lemonade. How much lemon remains?

pound

### Question 5:

Martha bought  $20\frac{5}{6}$  yards of fabric to make curtains. She only used  $16\frac{7}{9}$  yards of the fabric. How much fabric remained?

yards

### Question 6:

Jaden has learned to play  $18\frac{1}{4}$  of the measures for Fur Elise on the piano. If the song is composed of 108 measures, how many more measures does she have to learn?

measures

### Question 7:

Sebastian wrote  $24\frac{1}{5}$  pages of his novel on Saturday and  $39\frac{1}{8}$  pages of his novel on Sunday. How many

more pages did he write on Sunday?

pages

**Question 8:**

Alice and Enrique are jogging on a trail that is  $6\frac{1}{8}$  miles long. If they take a short break after jogging the first  $3\frac{1}{2}$  miles, how much will they have left to jog after their break?

miles

**Question 9:**

The rehearsal for Acts I and II of the school play lasted  $5\frac{1}{2}$  hours. If  $3\frac{3}{4}$  hours were spent rehearsing Act I, how much time was spent practicing Act II?

hours

**Question 10:**

Mandy cut  $34\frac{1}{3}$  feet of string to use for the tail of a kite. However, she realized that the tail was too long and cut off  $6\frac{3}{5}$  feet of string from the tail. How long is the tail of the kite now?

feet



## Correct Answers

### Lesson: Adding and Subtracting Mixed Numbers

#### Lesson Topic: Add mixed numbers with unlike denominators

Question 1:

$$= 1\frac{9}{6} + 3\frac{1}{12} = (38 + 31)/12 = 69/12 = 5\frac{9}{12} = 5\frac{3}{4}$$

Question 2:

$$= 9\frac{9}{2} + 17\frac{4}{4} = (18 + 17)/4 = 35/4 = 8\frac{3}{4}$$

Question 3:

$$= 2\frac{1}{5} + 2\frac{3}{10} = (42 + 23)/10 = 65/10 = 6\frac{5}{10} = 6\frac{1}{2}$$

Question 4:

$$= 3\frac{3}{2} + 17\frac{4}{4} = (6 + 17)/4 = 23/4 = 5\frac{3}{4}$$

Question 5:

$$= 1\frac{9}{4} + 9\frac{8}{8} = (38 + 9)/8 = 47/8 = 5\frac{7}{8}$$

Question 6:

$$= 7\frac{7}{3} + 2\frac{3}{6} = (14 + 23)/6 = 37/6 = 6\frac{1}{6}$$

Question 7:

$$= 3\frac{3}{7} + 2\frac{3}{14} = (66 + 23)/14 = 89/14 = 6\frac{5}{14}$$

Question 8:

$$= 1\frac{11}{4} + 9\frac{8}{8} = (22 + 9)/8 = 31/8 = 3\frac{7}{8}$$

Question 9:

$$= 2\frac{5}{3} + 2\frac{3}{6} = (50 + 23)/6 = 73/6 = 12\frac{1}{6}$$

Question 10:

$$= 2\frac{6}{7} + 2\frac{3}{14} = (52 + 23)/14 = 75/14 = 5\frac{5}{14}$$

#### Lesson Topic: Add mixed numbers with unlike denominators word problems

Question 1:

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

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

$$1\frac{5}{6} + 2\frac{3}{6} = 3\frac{8}{6} = 3\frac{4}{3} = 4\frac{1}{3} \text{ miles}$$

Question 2:

$$4 \frac{5}{8} = 4 \frac{15}{24}$$

$$3 \frac{2}{3} = 3 \frac{16}{24}$$

$$4 \frac{15}{24} + 3 \frac{16}{24} = 7 \frac{31}{24} = \mathbf{8 \frac{7}{24} \text{ pounds}}$$

**Question 3:**

$$1 \frac{3}{4} = 1 \frac{9}{12}$$

$$33 \frac{1}{3} = 33 \frac{4}{12}$$

$$1 \frac{9}{12} + 33 \frac{4}{12} = 34 \frac{13}{12} = \mathbf{35 \frac{1}{12} \text{ gallons}}$$

**Question 4:**

Two hours and fifteen minutes =  $2 \frac{1}{4}$  hours

Five and a half hours =  $5 \frac{1}{2}$  hours

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

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

$$2 \frac{1}{4} + 5 \frac{2}{4} = \mathbf{7 \frac{3}{4} \text{ hours}}$$

**Question 5:**

$$4 \frac{1}{2} = 4 \frac{4}{8}$$

$$2 \frac{3}{4} = 2 \frac{6}{8}$$

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

$$4 \frac{4}{8} + 2 \frac{6}{8} + 3 \frac{1}{8} = 9 \frac{11}{8} = \mathbf{10 \frac{3}{8} \text{ miles}}$$

**Question 6:**

$$2 \frac{1}{7} = 2 \frac{3}{21}$$

$$3 \frac{2}{3} = 3 \frac{14}{21}$$

$$3 \frac{1}{3} = 3 \frac{7}{21}$$

$$2 \frac{3}{21} + 3 \frac{14}{21} + 3 \frac{7}{21} = 8 \frac{24}{21} = 9 \frac{3}{21} = \mathbf{9 \frac{1}{7} \text{ pounds}}$$

**Question 7:**

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

$$1 \frac{1}{2} = 1 \frac{6}{12}$$

$$4 \frac{5}{12} = 4 \frac{5}{12}$$

$$1 \frac{3}{12} + 1 \frac{6}{12} + 4 \frac{5}{12} = 6 \frac{14}{12} = 7 \frac{2}{12} = 7 \frac{1}{6} \text{ rows}$$

**Question 8:**

$$2 \frac{1}{9} = 2 \frac{2}{18}$$

$$4 \frac{1}{2} = 4 \frac{9}{18}$$

$$2 \frac{2}{18} + 4 \frac{9}{18} = 6 \frac{11}{18} \text{ pounds}$$

**Question 9:**

$$1 \frac{3}{5} = 1 \frac{9}{15}$$

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

$$1 \frac{9}{15} + 1 \frac{5}{15} = 2 \frac{14}{15} \text{ pounds}$$

**Question 10:**

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

$$4 \frac{5}{6} = 4 \frac{5}{6}$$

$$1 \frac{3}{6} + 4 \frac{5}{6} = 5 \frac{8}{6} = 6 \frac{2}{6} = 6 \frac{1}{3} \text{ hours}$$

**Lesson Topic: Subtract mixed numbers with unlike denominators**

**Question 1:**

$$4 \frac{3}{10} = 4 \frac{30}{100} \quad 4 \frac{30}{100} - 2 \frac{23}{100} = 2 \frac{7}{100}$$

**Question 2:**

$$6 \frac{1}{2} = 6 \frac{2}{4} \quad 6 \frac{2}{4} - 4 \frac{1}{4} = 2 \frac{1}{4}$$

**Question 3:**

$$6 \frac{1}{3} = 6 \frac{2}{6} \quad 6 \frac{2}{6} - 4 \frac{5}{6} = \frac{38}{6} - \frac{29}{6} = \frac{9}{6} = \frac{3}{2} = 1 \frac{1}{2}$$

**Question 4:**

$$3 \frac{3}{10} = 3 \frac{30}{100} \quad 3 \frac{30}{100} - 2 \frac{23}{100} = 1 \frac{7}{100}$$

**Question 5:**

$$6\frac{2}{5} = 6\frac{4}{10} \quad 6\frac{4}{10} - 3\frac{7}{10} = \frac{64}{10} - \frac{37}{10} = \frac{27}{10} = 2\frac{7}{10}$$

**Question 6:**

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

**Question 7:**

$$7\frac{1}{6} = 7\frac{2}{12} \quad 7\frac{2}{12} - 3\frac{5}{12} = \frac{86}{12} - \frac{41}{12} = \frac{45}{12} = \frac{15}{4} = 3\frac{3}{4}$$

**Question 8:**

$$5\frac{1}{3} = 5\frac{2}{6} \quad 5\frac{2}{6} - 4\frac{5}{6} = \frac{32}{6} - \frac{29}{6} = \frac{3}{6} = \frac{1}{2}$$

**Question 9:**

$$9\frac{1}{4} = 9\frac{2}{8} \quad 9\frac{2}{8} - 5\frac{3}{8} = \frac{74}{8} - \frac{43}{8} = \frac{31}{8} = 3\frac{7}{8}$$

**Question 10:**

$$5\frac{2}{5} = 5\frac{4}{10} \quad 5\frac{4}{10} - 3\frac{7}{10} = \frac{54}{10} - \frac{37}{10} = \frac{17}{10} = 1\frac{7}{10}$$

**Lesson Topic: Subtract mixed numbers with unlike denominators word problems**

**Question 1:**

$$4\frac{2}{3} = 4\frac{10}{15} \quad 4\frac{10}{15} - 3\frac{6}{15} = 1\frac{4}{15} \text{ pounds}$$

**Question 2:**

$$654\frac{1}{2} = 654\frac{4}{8}$$

$$432\frac{1}{8} = 432\frac{1}{8}$$

$$654\frac{4}{8} - 432\frac{1}{8} = 222\frac{3}{8} \text{ pages}$$

**Question 3:**

$$10\frac{1}{2} = 10\frac{2}{4}$$

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

$$10\frac{2}{4} - 7\frac{1}{4} = 3\frac{1}{4} \text{ hours}$$

**Question 4:**

**Find Common Denominator**

$$2\frac{5}{9} = 2\frac{25}{45}$$

$$1\frac{4}{5} = 1\frac{36}{45}$$

**Amount Remains**

$$2\frac{25}{45} - 1\frac{36}{45} = \frac{34}{45} \text{ pound}$$

**Question 5:**

$$20\frac{5}{6} = 20\frac{15}{18} \quad 16\frac{7}{9} = 16\frac{14}{18} \quad 20\frac{15}{18} - 16\frac{14}{18} = 4\frac{1}{18} \text{ yards}$$

**Question 6:**

$$108 = 107\frac{4}{4} \quad 18\frac{1}{4} = 18\frac{1}{4} \quad 107\frac{4}{4} - 18\frac{1}{4} = 89\frac{3}{4} \text{ measures}$$

**Question 7:**

$$24 \frac{1}{5} = 24 \frac{8}{40} \quad 39 \frac{1}{8} = 39 \frac{5}{40} \quad 39 \frac{5}{40} - 24 \frac{8}{40} = 14 \frac{37}{40} \text{ pages}$$

**Question 8:**

$$6 \frac{1}{8} = 6 \frac{1}{8} \quad 3 \frac{1}{2} = 3 \frac{4}{8} \quad 6 \frac{1}{8} - 3 \frac{4}{8} = 2 \frac{5}{8} \text{ miles}$$

**Question 9:**

$$5 \frac{1}{2} = 5 \frac{2}{4} \quad 3 \frac{3}{4} = 3 \frac{3}{4} \quad 5 \frac{2}{4} - 3 \frac{3}{4} = 1 \frac{3}{4} \text{ hours}$$

**Question 10:**

$$34 \frac{1}{3} = 34 \frac{5}{15} \quad 6 \frac{3}{5} = 6 \frac{9}{15} \quad 34 \frac{5}{15} - 6 \frac{9}{15} = 27 \frac{11}{15} \text{ feet}$$