Quick Review

To add mixed numbers, follow these steps:

- Change the fractions to equivalent fractions with common denominators.
- Add the fractions.
- Then add the whole numbers.

For example, to add $3\frac{7}{8} + 2\frac{1}{3}$:

$$3\frac{7}{8} + 2\frac{1}{3} = 3\frac{21}{24} + 2\frac{8}{24}$$
$$= 5\frac{29}{24}$$
$$= 5 + \frac{24}{24} + \frac{5}{24}$$
$$= 5 + 1 + \frac{5}{24}$$
$$= 6\frac{5}{24}$$

Practice

1. Write each mixed number as an improper fraction.

a) $4\frac{3}{4} = \frac{16}{4} + \frac{3}{4}$
$= \frac{\quad}{4}$

b) $4\frac{7}{10} = \frac{\quad}{10} + \frac{\quad}{10}$
$= \frac{\quad}{10}$

c) $2\frac{3}{8} =$ _____
$=$ ____

2. Write each improper fraction as a mixed number.

a) $\frac{8}{5} = \frac{5}{5} + \frac{3}{5}$
$= 1\frac{\quad}{5}$

b) $\frac{16}{3} = \frac{\quad}{3} + \frac{\quad}{3}$
$=$ ____

c) $\frac{17}{5} =$ _____
$=$ ____

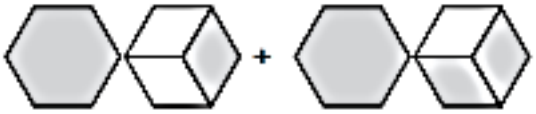
d) $\frac{29}{8} =$ _____
$=$ ____

e) $\frac{33}{9} =$ _____
$=$ _____

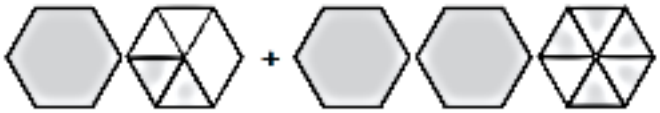
f) $\frac{41}{7} =$ _____
$=$ ____

3. Write the addition equation represented by each diagram.

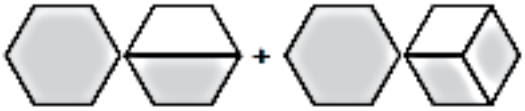
a) _____



b) _____



c) _____

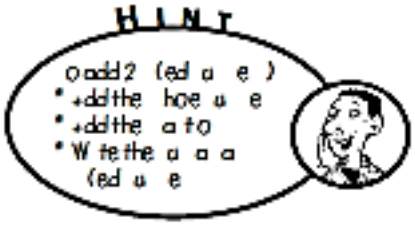


d) _____

4. Add.

a) $2\frac{1}{2} + 3\frac{2}{5} =$ ____

b) $7\frac{1}{9} + 3\frac{1}{6} =$ ____



5. Linda is making new curtains for her kitchen and living room windows.

She needs $1\frac{1}{3}$ m of fabric for the kitchen and $2\frac{3}{5}$ m for the living room.

How many metres of fabric does Linda need altogether?

_____

6. Last week, Jenna worked $5\frac{2}{3}$ h baby-sitting and $3\frac{1}{2}$ h giving swimming lessons. How many hours did she work in all?

_____

5.7 Subtracting with Mixed Numbers

Quick Review

At Home At School

To subtract mixed numbers, follow these steps:

- Change the fractions to equivalent fractions with common denominators.
- Subtract the fractions.
- Then subtract the whole numbers.

Sometimes, you need to write improper fractions to subtract mixed numbers.

For example, to subtract: $3\frac{1}{8} - 2\frac{1}{2}$

$3\frac{1}{8} - 2\frac{1}{2} = 3\frac{1}{8} - 2\frac{4}{8}$

Since $\frac{1}{8} < \frac{4}{8}$, write $3\frac{1}{8}$ as $3 + \frac{1}{8}$, then take 1 from 3 and write it as $\frac{8}{8}$.

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

$= 2\frac{9}{8}$

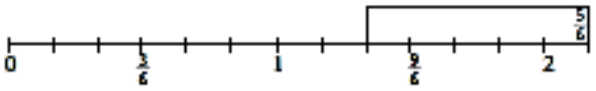
So, $3\frac{1}{8} - 2\frac{1}{2} = 2\frac{9}{8} - 2\frac{4}{8}$

$= \frac{5}{8}$

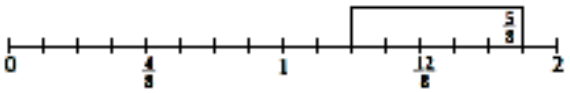
Practice

1. Write a subtraction equation for each picture.

a) _____



b) _____

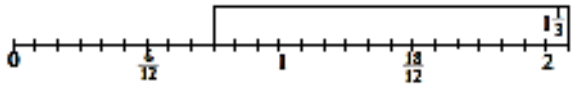


2. Subtract.

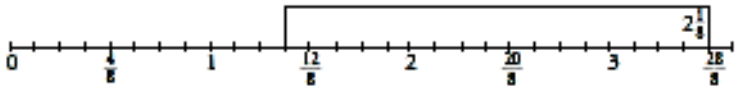
a) $3\frac{7}{8} - 1\frac{5}{8} =$ _____ b) $8\frac{3}{4} - 2\frac{1}{4} =$ _____ c) $5\frac{7}{12} - 3\frac{1}{12} =$ _____

3. Write a subtraction equation for each picture.

a) _____



b) _____



4. We know that $\frac{1}{2} - \frac{1}{3} = \frac{1}{6}$.

Use this result to find each sum.

a) $5\frac{1}{2} - 1\frac{1}{3} =$ ___

b) $2\frac{1}{2} - 1\frac{1}{3} =$ ___

c) $4\frac{1}{2} - \frac{1}{3} =$ ___

5. Regroup to subtract.

a) $2 - \frac{1}{3} = 1\frac{}{3} -$ ___

$=$ ___

b) $3 - 1\frac{5}{8} =$ _____

$=$ ___

c) $4 - \frac{2}{5} =$ _____

$=$ ___

6. Subtract. Regroup if necessary.

a) $4\frac{1}{9} - 2\frac{2}{3} =$ _____

b) $4 - 1\frac{1}{2} =$ _____

c) $3\frac{4}{7} - 1\frac{1}{2} =$ _____

d) $7\frac{1}{4} - 3\frac{5}{6} =$ _____

7. George swam $8\frac{3}{4}$ laps on Monday and $6\frac{1}{5}$ laps on Tuesday.

How many more laps did he swim on Monday than on Tuesday?

_____

8. Armin has 3 flower gardens. He bought 5 bags of mulch.

Armin used $1\frac{1}{2}$ bags of mulch on each garden.

How much mulch is left? _____