

Homework & Practice 9-10

Subtract Mixed Numbers

Another Look!

Janet grew a pumpkin that weighs $13\frac{3}{4}$ pounds and a melon that weighs $8\frac{2}{4}$ pounds. How much heavier is the pumpkin than the melon?

Subtract Mixed Numbers

a. Subtract the fractions.

Rename whole

numbers as fractions
as needed.

b. Subtract the whole numbers.

$$\begin{array}{r} 13\frac{3}{4} \\ - 8\frac{2}{4} \\ \hline 5\frac{1}{4} \end{array}$$

Subtract Fractions

a. Write the mixed numbers as fractions.

b. Subtract the fractions.

c. Write the fraction as a mixed number.

$$\begin{array}{r} 13\frac{3}{4} = \frac{55}{4} \\ - 8\frac{2}{4} = -\frac{34}{4} \\ \hline \frac{21}{4} = 5\frac{1}{4} \end{array}$$

The pumpkin is $5\frac{1}{4}$ pounds heavier than the melon.

You can subtract mixed numbers with like denominators using properties of operations.



For **1–16**, find each difference by subtracting mixed numbers or subtracting equivalent fractions.

1.
$$\begin{array}{r} 10\frac{3}{4} \\ - 7\frac{1}{4} \\ \hline \end{array}$$

2.
$$\begin{array}{r} 7\frac{4}{6} \\ - 2\frac{3}{6} \\ \hline \end{array}$$

3.
$$\begin{array}{r} 3 \\ - 2\frac{2}{3} \\ \hline \end{array}$$

4.
$$\begin{array}{r} 17\frac{8}{12} \\ - 12\frac{3}{12} \\ \hline \end{array}$$

5. $9\frac{2}{6} - 6\frac{5}{6}$

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

7. $6\frac{3}{12} - 3\frac{4}{12}$

8. $5\frac{2}{8} - 3\frac{7}{8}$

9. $8\frac{1}{4} - 7\frac{3}{4}$

10. $2\frac{9}{10} - 2\frac{5}{10}$

11. $6\frac{5}{6} - 5\frac{4}{6}$

12. $3 - 1\frac{3}{4}$

13. $11 - 2\frac{1}{2}$

14. $42\frac{6}{10} - 10$

15. $18\frac{1}{5} - 2\frac{2}{5}$

16. $27\frac{2}{6} - 12\frac{1}{6}$

17. **A-Z Vocabulary** Use a vocabulary word to complete the sentence.
- A number that has a whole number part and a fraction part is called a(n)
- _____.

18. Some of the world's smallest horses include Thumbelina who stands $17\frac{1}{4}$ inches tall, Black Beauty who stands $18\frac{2}{4}$ inches tall, and Einstein who stands 14 inches tall.
- a. How much taller is Black Beauty than Thumbelina?
- b. How much taller is Thumbelina than Einstein?

19. **MP.2 Reasoning** If Carol hangs a picture using $\frac{3}{8}$ yard of a wire that is $1\frac{1}{8}$ yards long, how much wire will Carol have left?

20. Write 6,219 in expanded form.

21. **Higher Order Thinking** Some of the largest insects in the world include the Rhinoceros Beetle, the Giant Walking Stick, and the Giant Weta Beetle. How much longer is the Giant Walking Stick than the Rhinoceros Beetle and the Giant Weta Beetle combined?



Common Core Assessment

22. Jessie needs a board $7\frac{9}{12}$ feet long. She has a board $9\frac{1}{12}$ feet long. How much of the length does Jessie need to cut from the board? Use equivalent fractions to solve.
- (A) $1\frac{1}{3}$ feet
(B) $2\frac{8}{12}$ feet
(C) $2\frac{2}{3}$ feet
(D) $16\frac{10}{12}$ feet
23. Robyn ran $5\frac{3}{4}$ miles last week. She ran $4\frac{1}{4}$ miles this week. How many more miles did Robyn run last week? Use equivalent fractions to solve.
- (A) $1\frac{1}{4}$ miles
(B) $1\frac{1}{2}$ miles
(C) $1\frac{3}{4}$ miles
(D) 10 miles