

LESSON
4-7 Practice B
Mixed Numbers and Improper Fractions

Write each mixed number as an improper fraction.

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

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

3. $5\frac{1}{4}$

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

5. $3\frac{3}{4}$

6. $4\frac{1}{3}$

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

8. $3\frac{5}{6}$

9. $7\frac{1}{3}$

Write each improper fraction as a mixed number or whole number. Tell whether your answer is a mixed number or whole number.

10. $\frac{17}{3}$

11. $\frac{40}{8}$

12. $\frac{48}{7}$

13. $\frac{33}{10}$

14. $\frac{50}{8}$

15. $\frac{83}{9}$

16. $\frac{104}{8}$

17. $\frac{121}{6}$

18. $\frac{78}{11}$

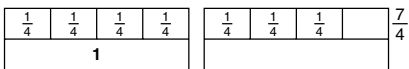
19. The hotel ordered an extra-long rug for a hallway that is $\frac{123}{2}$ feet long. What is the rug's length in feet and inches? Remember, 1 foot = 12 inches.
- _____

20. During this year's football-throwing contest, John threw the ball $49\frac{2}{3}$ feet. Sharon threw the ball 51 feet. Who threw the ball $\frac{153}{3}$ feet?
- _____

LESSON Exploration Recording Sheet

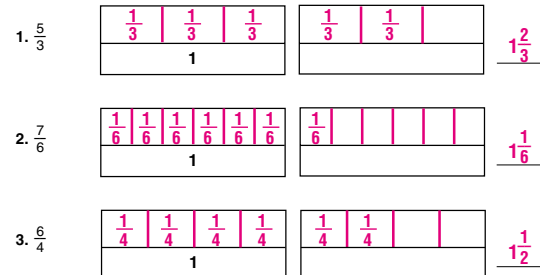
4-7 Mixed Numbers and Improper Fractions

An *improper fraction* is equal to or greater than 1. The model shows that $\frac{7}{4} = \frac{4}{4} + \frac{3}{4} = 1 + \frac{3}{4}$.



The mixed number $1\frac{3}{4} = 1 + \frac{3}{4}$.

For each improper fraction, complete the model and write the improper fraction as a mixed number.



Think and Discuss

4. Explain why $\frac{6}{4} = 1\frac{1}{2}$.
Possible answer: $\frac{6}{4} = \frac{4}{4} + \frac{2}{4} = 1$ and $\frac{2}{4}$ is the same as $\frac{1}{2}$ so $\frac{6}{4} = 1\frac{1}{2}$.

5. Discuss a situation in which improper fractions are used.

Possible answer: Measuring snow or rainfall amounts

Copyright © by Holt, Rinehart and Winston.
All rights reserved.

65

Holt Middle School Math Course 1

LESSON Practice A

4-7 Mixed Numbers and Improper Fractions

Determine whether each fraction is proper or improper.

- $\frac{1}{4}$ proper
- $\frac{3}{4}$ proper
- $\frac{7}{4}$ improper
- $\frac{9}{3}$ improper
- $\frac{2}{3}$ proper
- $\frac{6}{2}$ improper

Write each mixed number as an improper fraction.

- $1\frac{1}{2}$ $\frac{3}{2}$
- $1\frac{1}{3}$ $\frac{4}{3}$
- $2\frac{1}{2}$ $\frac{5}{2}$
- $1\frac{1}{4}$ $\frac{5}{4}$
- $1\frac{2}{3}$ $\frac{5}{3}$
- $2\frac{1}{3}$ $\frac{7}{3}$

Write each improper fraction as a mixed number or whole number. Tell whether your answer is a mixed number or whole number.

- $\frac{4}{1}$ 4; whole number
- $\frac{6}{3}$ 2; whole number
- $\frac{4}{3}$ $1\frac{1}{3}$; mixed number
- $\frac{5}{2}$ $2\frac{1}{2}$; mixed number
- $\frac{7}{5}$ $1\frac{2}{5}$; mixed number
- $\frac{3}{2}$ $1\frac{1}{2}$; mixed number

19. Mickey timed her speech at $\frac{12}{5}$ minutes. She cannot go over 2 minutes. Should she add more to her speech, or cut some lines? Explain.

She should cut some lines because $\frac{12}{5} = 2\frac{2}{5}$ minutes, which is longer than 2 minutes.

20. In a frog-jumping contest, Jim's frog hopped $2\frac{1}{3}$ feet. Matthew's frog hopped $1\frac{2}{3}$ feet. Whose frog hopped $\frac{7}{3}$ feet?

Jim's frog

Copyright © by Holt, Rinehart and Winston.
All rights reserved.

66

Holt Middle School Math Course 1

LESSON Practice B

4-7 Mixed Numbers and Improper Fractions

Write each mixed number as an improper fraction.

- $3\frac{1}{2}$ $\frac{7}{2}$
- $2\frac{1}{3}$ $\frac{7}{3}$
- $5\frac{1}{4}$ $\frac{21}{4}$
- $1\frac{3}{7}$ $\frac{10}{7}$
- $3\frac{3}{4}$ $\frac{15}{4}$
- $4\frac{1}{3}$ $\frac{13}{3}$
- $2\frac{3}{5}$ $\frac{13}{5}$
- $3\frac{5}{6}$ $\frac{23}{6}$
- $7\frac{1}{3}$ $\frac{22}{3}$

Write each improper fraction as a mixed number or whole number. Tell whether your answer is a mixed number or whole number.

- $\frac{17}{3}$ $5\frac{2}{3}$; mixed number
- $\frac{40}{8}$ 5; whole number
- $\frac{48}{7}$ $6\frac{6}{7}$; mixed number
- $\frac{33}{10}$ $3\frac{3}{10}$; mixed number
- $\frac{50}{8}$ $6\frac{1}{4}$; mixed number
- $\frac{83}{9}$ $9\frac{2}{9}$; mixed number
- $\frac{104}{8}$ 13; whole number
- $\frac{121}{6}$ $20\frac{1}{6}$; mixed number
- $\frac{78}{11}$ $7\frac{1}{11}$; mixed number

19. The hotel ordered an extra-long rug for a hallway that is $\frac{123}{2}$ feet long. What is the rug's length in feet and inches? Remember, 1 foot = 12 inches.

61 feet and 6 inches

20. During this year's football-throwing contest, John threw the ball $49\frac{2}{3}$ feet. Sharon threw the ball 51 feet. Who threw the ball $\frac{153}{3}$ feet?

Sharon

Copyright © by Holt, Rinehart and Winston.
All rights reserved.

67

Holt Middle School Math Course 1

LESSON Practice C

4-7 Mixed Numbers and Improper Fractions

Write each mixed number as an improper fraction.

- $2\frac{2}{5}$ $\frac{12}{5}$
- $1\frac{5}{10}$ $\frac{15}{10}$
- $6\frac{3}{4}$ $\frac{27}{4}$
- $2\frac{5}{9}$ $\frac{23}{9}$
- $14\frac{2}{3}$ $\frac{44}{3}$
- $2\frac{9}{11}$ $\frac{31}{11}$

Write each improper fraction as a mixed number or whole number. Tell whether your answer is a mixed number or whole number.

- $\frac{161}{7}$ 23; whole number
- $\frac{73}{4}$ $18\frac{1}{4}$; mixed number
- $\frac{52}{9}$ $5\frac{7}{9}$; mixed number
- $\frac{225}{9}$ 25; whole number
- $\frac{234}{11}$ $21\frac{3}{11}$; mixed number
- $\frac{127}{12}$ $10\frac{7}{12}$; mixed number

Replace each shape with a number that will make the equation correct.

- $\triangle \frac{2}{7} = \frac{93}{7}$ 13; 7
- $\triangle \frac{3}{8} = \frac{67}{8}$ 8; 8
- $\triangle \frac{4}{5} = \frac{64}{5}$ 12; 5
- $43\triangle = \frac{647}{15}$ 2; 15
- $13\triangle = \frac{124}{9}$ 7; 9
- $14\triangle = \frac{113}{8}$ 1; 8

19. Amy made a video that is 5,400 seconds long. What is the video's running time in hours and minutes?

1 hour and 30 minutes

20. Justin accidentally erased the numerator of the fraction part of a mixed number. He knows that its whole number part is 45 and the denominator of the fraction part is 9. He also knows that when the mixed number is written as an improper fraction, its numerator is 412. What is the numerator that Justin erased?

7

Copyright © by Holt, Rinehart and Winston.
All rights reserved.

68

Holt Middle School Math Course 1