

Name \_\_\_\_\_

Date \_\_\_\_\_

**Additional Exercises 1.2**  
**Form I**  
Fractions in Algebra

Convert each mixed number to an improper fraction.

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

1. \_\_\_\_\_

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

2. \_\_\_\_\_

3.  $10\frac{3}{4}$

3. \_\_\_\_\_

Convert each improper fraction to a mixed number.

4.  $\frac{8}{3}$

4. \_\_\_\_\_

5.  $\frac{22}{5}$

5. \_\_\_\_\_

6.  $\frac{86}{4}$

6. \_\_\_\_\_

Simplify each fraction by reducing it to its lowest terms.

7.  $\frac{10}{18}$

7. \_\_\_\_\_

8.  $\frac{24}{36}$

8. \_\_\_\_\_

9.  $\frac{45}{105}$

9. \_\_\_\_\_

Perform the indicated operation in each exercise. Reduce answers to lowest terms if possible.

10.  $\frac{1}{7} \cdot \frac{2}{5}$

10. \_\_\_\_\_

11.  $\frac{1}{3} \cdot \frac{6}{7}$

11. \_\_\_\_\_

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12.  $10 \cdot \frac{12}{15}$  12. \_\_\_\_\_

13.  $\frac{3}{4} \div \frac{4}{5}$  13. \_\_\_\_\_

14.  $\frac{5}{8} \div \frac{10}{12}$  14. \_\_\_\_\_

15.  $\left(3\frac{3}{8}\right)\left(2\frac{1}{3}\right)$  15. \_\_\_\_\_

16.  $\left(10\frac{4}{5}\right) \div \left(2\frac{5}{6}\right)$  16. \_\_\_\_\_

17.  $\frac{5}{7} + \frac{1}{7}$  17. \_\_\_\_\_

18.  $\frac{1}{4} + \frac{2}{3}$  18. \_\_\_\_\_

19.  $\frac{3}{5} + \frac{1}{6}$  19. \_\_\_\_\_

20.  $\frac{10}{11} - \frac{8}{11}$  20. \_\_\_\_\_

21.  $\frac{8}{15} - \frac{2}{5}$  21. \_\_\_\_\_

22.  $\frac{9}{10} - \frac{1}{6}$  22. \_\_\_\_\_

23.  $15\frac{3}{4} - 10\frac{1}{4}$  23. \_\_\_\_\_

24.  $18\frac{7}{8} - 14\frac{5}{16}$  24. \_\_\_\_\_

25. Is 6 a solution to the equation  $\frac{4}{5}x + \frac{1}{5} = 5$ ? 25. \_\_\_\_\_

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**Additional Exercises 1.2**  
**Form II**  
Fractions in Algebra

Convert each mixed number to an improper fraction.

1.  $4\frac{5}{12}$

1. \_\_\_\_\_

2.  $12\frac{3}{10}$

2. \_\_\_\_\_

3.  $15\frac{10}{16}$

3. \_\_\_\_\_

Convert each improper fraction to a mixed number.

4.  $\frac{43}{3}$

4. \_\_\_\_\_

5.  $\frac{96}{7}$

5. \_\_\_\_\_

6.  $\frac{105}{9}$

6. \_\_\_\_\_

Simplify each fraction by reducing it to its lowest terms.

7.  $\frac{25}{40}$

7. \_\_\_\_\_

8.  $\frac{16}{60}$

8. \_\_\_\_\_

9.  $\frac{115}{120}$

9. \_\_\_\_\_

Perform the indicated operation in each exercise. Reduce answers to lowest terms if possible.

10.  $\frac{3}{5} \cdot \frac{1}{2}$

10. \_\_\_\_\_

11.  $\frac{5}{18} \cdot \frac{20}{25}$

11. \_\_\_\_\_

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12.  $200 \cdot \frac{4}{5}$  12. \_\_\_\_\_

13.  $\frac{9}{10} \div \frac{2}{5}$  13. \_\_\_\_\_

14.  $24 \div \frac{3}{4}$  14. \_\_\_\_\_

15.  $\left(12\frac{5}{8}\right) \div \left(4\frac{1}{4}\right)$  15. \_\_\_\_\_

16.  $\left(7\frac{3}{5}\right)\left(3\frac{2}{19}\right)$  16. \_\_\_\_\_

17.  $\frac{7}{10} + \frac{1}{10}$  17. \_\_\_\_\_

18.  $\frac{5}{9} + \frac{5}{6}$  18. \_\_\_\_\_

19.  $\frac{5}{9} - \frac{3}{8}$  19. \_\_\_\_\_

20.  $\frac{5}{7} - \frac{1}{4}$  20. \_\_\_\_\_

21.  $10\frac{9}{10} - 5\frac{1}{10}$  21. \_\_\_\_\_

22.  $12\frac{7}{8} - 6\frac{1}{3}$  22. \_\_\_\_\_

23. Is  $\frac{3}{5}$  a solution to the equation  $8 + 15x = 23 - 10x$ ? 23. \_\_\_\_\_

Translate from English to an algebraic expression or equation. Let the variable  $x$  represent the number.

24.  $\frac{3}{4}$  of a number 24. \_\_\_\_\_

25. A number increased by  $\frac{5}{8}$  of itself. 25. \_\_\_\_\_

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**Additional Exercises 1.2**  
**Form III**  
Fractions in Algebra

Convert each mixed number to an improper fraction.

1.  $10\frac{3}{8}$

1. \_\_\_\_\_

2.  $16\frac{12}{17}$

2. \_\_\_\_\_

3.  $47\frac{13}{108}$

3. \_\_\_\_\_

Convert each improper fraction to a mixed number.

4.  $\frac{86}{9}$

4. \_\_\_\_\_

5.  $\frac{120}{14}$

5. \_\_\_\_\_

6.  $\frac{310}{65}$

6. \_\_\_\_\_

Simplify each fraction by reducing it to its lowest terms.

7.  $\frac{80}{142}$

7. \_\_\_\_\_

8.  $\frac{108}{144}$

8. \_\_\_\_\_

9.  $\frac{285}{1125}$

9. \_\_\_\_\_

Perform the indicated operation in each exercise. Reduce answers to lowest terms if possible.

10.  $\frac{5}{8} \cdot \frac{5}{8}$

10. \_\_\_\_\_

11.  $350 \cdot \frac{4}{5}$

11. \_\_\_\_\_

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12.  $\left(4\frac{4}{5}\right)\left(5\frac{3}{8}\right)$  12. \_\_\_\_\_

13.  $\frac{9}{16} \div \frac{5}{8}$  13. \_\_\_\_\_

14.  $\left(16\frac{3}{7}\right) \div \left(8\frac{2}{6}\right)$  14. \_\_\_\_\_

15.  $\frac{5}{12} + \frac{3}{8}$  15. \_\_\_\_\_

16.  $6\frac{1}{8} + 4\frac{3}{8}$  16. \_\_\_\_\_

17.  $\frac{7}{9} - \frac{1}{12}$  17. \_\_\_\_\_

18.  $\frac{17}{18} - \frac{3}{4}$  18. \_\_\_\_\_

19.  $23\frac{9}{10} - 15\frac{2}{5}$  19. \_\_\_\_\_

20.  $42\frac{4}{5} - 13\frac{2}{3}$  20. \_\_\_\_\_

21. Is 20 a solution to the equation  $\frac{1}{4}(x-3) = \frac{1}{3}(3x-18)$ ? 21. \_\_\_\_\_

22. Is  $4\frac{4}{5}$  a solution to the equation  $\left(x \div \frac{3}{5}\right) = x + 3\frac{1}{5}$ ? 22. \_\_\_\_\_

Translate from English to an algebraic expression or equation. Let the variable  $x$  represent the number.

23.  $\frac{4}{5}$  of a number decreased by 6 23. \_\_\_\_\_

24. The product of  $\frac{3}{8}$  and a number increased by 4 24. \_\_\_\_\_

25. The sum of  $\frac{3}{5}$  of a number and  $\frac{1}{2}$  of the number is 11 25. \_\_\_\_\_