

LESSON

Fraction Operations**4****Practice B: Solving Fraction Equations: Addition and Subtraction**

Solve each equation. Write the solution in simplest form. Check your answers.

1. $5\frac{1}{4} = x + \frac{7}{16}$

2. $6\frac{1}{4} = z + 1\frac{5}{8}$

3. $2\frac{2}{7} = n - 4\frac{2}{3} - 1\frac{1}{3}$

4. $a - 2\frac{2}{11} = 2\frac{5}{22} - 1\frac{2}{11}$

5. $k + 3\frac{3}{4} = 5\frac{2}{3} - 1\frac{1}{3}$

6. $r + 6 = 9\frac{2}{5} - 2\frac{1}{2}$

7. $11\frac{2}{5} = q - 4\frac{2}{7} + 2\frac{1}{7}$

8. $4\frac{2}{5} - 2\frac{1}{2} = p + \frac{3}{10}$

9. $\frac{3}{8} + \frac{1}{6} = c - 4\frac{5}{6}$

10. $2\frac{1}{4} + c = 2\frac{1}{3} + 1\frac{1}{6}$

11. A seamstress raised the hem on Helen's skirt by $1\frac{1}{3}$ inches. The skirt's original length was 16 inches. What is the new length?

12. The bike trail is $5\frac{1}{4}$ miles long. Jessie has already cycled $2\frac{5}{8}$ miles of the trail. How much farther does she need to go to finish the trail?

9. $f = \frac{4}{9}$

10. $b = \frac{7}{8}$

7. $x = 2\frac{3}{4}$

8. $x = 3\frac{7}{10}$

11. $t = 2\frac{1}{10}$

12. $w = 2\frac{1}{12}$

13. $c = 18\frac{1}{2}$

14. $h = 1\frac{5}{6}$

15. $g = 4\frac{5}{6}$

16. $6\frac{1}{2}$ minutes

17. $3\frac{5}{6}$ gallons

Practice B

1. $x = 4\frac{13}{16}$

2. $z = 4\frac{5}{8}$

3. $n = 8\frac{2}{7}$

4. $a = 3\frac{5}{22}$

5. $k = \frac{7}{12}$

6. $r = \frac{9}{10}$

7. $q = 13\frac{19}{35}$

8. $p = 1\frac{3}{5}$

9. $c = 5\frac{3}{8}$

10. $c = 1\frac{1}{4}$

11. $14\frac{2}{3}$ inches

12. $2\frac{5}{8}$ miles

Practice C

1. $p = 1\frac{1}{15}$

2. $d = 20\frac{19}{20}$

3. $x = 15\frac{13}{24}$

4. $a = 5\frac{23}{44}$

5. $f = 18\frac{11}{50}$

6. $c = 3\frac{19}{24}$

7. $r = 5\frac{1}{10}$

8. $s = 7\frac{1}{10}$

9. $3\frac{1}{24}$ feet

10. $8\frac{1}{4}$ inches

Review for Mastery

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

2. $6\frac{3}{4}$

3. $4\frac{7}{8}$

4. $2\frac{11}{12}$

5. $x = 9\frac{1}{4}$

6. $x = 5$

Challenge

1. $2 \cdot \frac{7}{9} = \frac{14}{9} = 1\frac{5}{9}$

$1\frac{5}{9} + 12 = 13\frac{5}{9}$

$13\frac{5}{9} \div 2 = \frac{122}{18} = 6\frac{14}{18} = 6\frac{7}{9}$

$6\frac{7}{9} - \frac{7}{9} = 6$

2. $2 \cdot 3\frac{1}{4} = \frac{26}{4} = 6\frac{2}{4} = 6\frac{1}{2}$

$6\frac{1}{2} + 12 = 18\frac{1}{2}$

$18\frac{1}{2} \div 2 = \frac{37}{4} = 9\frac{1}{4}$

$9\frac{1}{4} - 3\frac{1}{4} = 6$

Problem Solving

1. $\frac{3}{4}$ of an hour

2. $1\frac{3}{4}$ inches

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

4. $\frac{2}{3}$ minute

5. A

6. G

7. A

8. G

Reading Strategies1. Subtract $2\frac{1}{3}$ from both sides of the equation.2. To get m by itself.3. Regroup 5 as $4\frac{3}{3}$.4. Add $3\frac{2}{3}$ to both sides of the equation.

5. Add fractions and whole numbers.

6. Possible answer: Get the variable on one side of the equation, rename if needed, add or subtract fractions, and add or subtract whole numbers.