

2-7**Practice: Skills****Solving Equations with Rational Numbers**

Solve each equation. Check your solution.

1. $x + 2.62 = 6.37$

2. $y - 3.16 = 7.92$

3. $-3.38 = r - 9.76$

4. $s + \frac{5}{8} = \frac{7}{8}$

5. $-\frac{5}{6} = x - \frac{1}{3}$

6. $-\frac{4}{5} + z = \frac{1}{10}$

7. $3.4c = 6.8$

8. $-1.56 = 0.26w$

9. $12.8y = 6.4$

10. $\frac{3}{4}x = 9$

11. $\frac{4}{9} = \frac{8}{11}a$

12. $-\frac{2}{5}s = \frac{4}{15}$

13. $-\frac{2}{3} = \frac{3}{10}t$

14. $-\frac{4}{11}w = -\frac{19}{22}$

15. $5.1 = -1.7r$

16. $z - (-3.2) = 3.69$

17. $-2.11 = w - (-5.81)$

18. $\frac{w}{2.6} = 3.5$

19. $-\frac{x}{1.8} = 7.2$

20. $2\frac{1}{4}y = 3\frac{3}{8}$

21. $-2\frac{2}{5}f = -3\frac{1}{5}$

22. $1.5d = \frac{3}{8}$

23. $-7.5g = -6\frac{2}{3}$

24. $-2\frac{1}{5} = c - \left(-\frac{4}{5}\right)$

2-7**Practice: Word Problems****Solving Equations with Rational Numbers**

<p>1. NATURE The height of a certain tree is 12.85 meters. The length ℓ of its longest branch can be found using the equation $\ell + 3.23 = 12.85$. Solve the equation.</p>	<p>2. SHOPPING Kristen went shopping and spent \$84.63 on books and CDs. The equation $84.63 = b + 43.22$ can be used to determine the amount b that she spent on books. Solve the equation.</p>
<p>3. ENERGY PRICES Suppose regular unleaded gasoline costs \$1.40 per gallon. The price p of premium gasoline can be found using the equation $\frac{p}{1.2} = 1.40$. What is the price of the premium gasoline?</p>	<p>4. DRIVING TIME Sam went for a drive last Sunday. His average speed was 46 miles per hour and he drove 115 miles. The equation $115 = 46t$ can be used to find the time t that he spent driving. Solve the equation.</p>
<p>5. AUTOMOBILES The bed of Julian's truck is $2\frac{1}{3}$ yards long. The length ℓ of the truck can be found by solving the equation $\ell - 2\frac{4}{9} = 2\frac{1}{3}$. What is the length of the truck?</p>	<p>6. SPORTS Leo and Ted both ran in a race. Leo's time was 9 minutes, which was $\frac{3}{4}$ of Ted's time. Using t for Ted's time, write a multiplication equation to represent the situation.</p>
<p>7. SPEED Ella rode the bus to work today. The distance she traveled was $4\frac{1}{4}$ miles and the ride took $\frac{1}{3}$ of an hour. The equation $\frac{1}{3}s = 4\frac{1}{4}$ can be used to find the average speed s of the bus. What was the average speed of the bus?</p>	<p>8. GEOMETRY A rectangle has area $6\frac{2}{3}$ square inches and length $2\frac{1}{2}$ inches. The equation $6\frac{2}{3} = 2\frac{1}{2}w$ can be used to find the width w of the rectangle. Solve the equation.</p>