2.4 Solving Equations with Fractions

Name_____

Solve each equation.

1. $\frac{2}{3}x+\frac{1}{2} = \frac{5}{6}$

2. $\frac{3}{8}+\frac{1}{2}x = -\frac{1}{4}$

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

4. $\frac{2}{5}x+3 = \frac{1}{2}x-\frac{9}{10}$

5. $-\frac{3}{10}x+1 = \frac{1}{10}x-\frac{7}{10}$

6. $\frac{3}{5}+\frac{2}{5}x = 1$

Answers: **1**. $\frac{1}{2}$; **3**. –1; **5**. $\frac{17}{4}$

Solve.

7. $-\frac{3}{2}+x = -\frac{5}{3}-\frac{1}{6}x$

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

9. $\frac{3}{4}\left(2p+\frac{1}{3}\right) = 2p-4\left(\frac{1}{3}p-1\right)$

10. $2\left(\frac{3}{5}x-\frac{1}{4}\right)+\frac{7}{10} = \frac{1}{20}x+\frac{1}{5}$

Answers: **7.** $-\frac{1}{7}$; **9.** $\frac{9}{2}$

Solve.

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

12. $\frac{2x-1}{3} = \frac{x+4}{2}$

13. $\frac{3x-1}{4}+1 = \frac{x-2}{8}$

14. $\frac{x+2}{5} = \frac{x}{2}+\frac{3x+1}{10}$

Answers: **11**. $\frac{17}{5}$; **13**. $-\frac{8}{5}$

Solve.

15. $-2.9-3.2x = 5.1$

16. $1.2+2.5x = 2.4$

17. $2.5-2.6x = -6(0.3x)$

18. $4.72-(2.5x-1.3)=6.02$

Answers: **15**. –2.5; **17.** 3.125

Solve.

19. $-1.4 - 2.3x = 3 - 2.3x$

20. $1.5x = 1.5x + 2.4$

21. $x - 3 = 5x - 4(x + 1) + 1$

22. $x - 4(x - 1) + 1 = -3x + 5$

Answers: **19**. $\varnothing$; **21.** $\{ x \in \mathbb{R} \}$