The Weekly Rigor

10 Problems in Solving Equations Involving Absolute Value

PROBLEMS

Solve each equation.

1. $|x| = 3$.

2. $|x + 4| = 7$.

3. $|x + 2| = 9$.

4. $|3x - 4| = 14$.

5. $|5x - 7| = 14$.

6. $|3 - 4x| = 8$.

7. $\left|\frac{x}{2} + \frac{x}{3}\right| = \frac{5}{3}$.

8. $\left|\frac{2x}{3} + \frac{3x}{4}\right| = \frac{5}{6}$.

9. $\left|\frac{x}{2} + \frac{3}{5}\right| = 4$.

10. $\left|\frac{x}{2} + \frac{5}{3}\right| = 5$.

ANSWERS

1. $x = -3; x = 3$	2. $x = -11; x = 3$
3. $x = -11; x = 7$	4. $x = -\frac{10}{3}; x = 6$
5. $x = -\frac{7}{5}; x = \frac{21}{5}$	6. $x = -\frac{5}{4}; x = \frac{11}{4}$
7. $x = -2; x = 2$	8. $x = -\frac{10}{17}; x = \frac{10}{17}$
9. $x = -\frac{46}{5}; x = \frac{34}{5}$	10. $x = -\frac{40}{3}; x = \frac{20}{3}$