

CP Algebra 2  
HW: Solving Equations

Name: \_\_\_\_\_

Solve each equation. Leave answers as simplified improper fractions or square roots, where applicable.

**SHOW YOUR WORK ON ADDITIONAL PAPER!**  
**Solve without a Calculator - Check your answer with a calculator!**

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

2.  $-4y + 6 = -3y + 12$

3.  $\frac{1}{2}(4 - 10f) + 5 = \frac{2}{3}(6f - 3)$

4.  $\frac{-y - 6}{3} = 7y$

5.  $\frac{1}{2}x - \frac{5}{3} = \frac{3}{5}x + \frac{11}{6}$

6.  $-\frac{2}{3}\left(\frac{6x}{5} - \frac{7}{10}\right) = \frac{17}{20}$

7.  $11x - 3 + 2x = 6(x + 4) + 7x$

8.  $\frac{3}{5}\left(\frac{7}{2}x + 3\right) + 4x = \frac{27}{4}$

9.  $\frac{3(v - 2)}{6v - 5} = \frac{7}{8}$

10.  $2\left(\frac{1}{3}w + \frac{1}{4}\right) = 4w + \frac{1}{3}w$

11.  $31 + 5(y + 7) = 41$

12.  $3 + \frac{5}{8}x = 2(x - 4)$

13.  $\frac{5d - 3}{4} - 4 = 4$

14.  $\sqrt{3}x - \frac{7}{4} = \frac{9}{5}$

15.  $\frac{\sqrt{24}}{3}x - \frac{7}{6} = \frac{9}{2} + \sqrt{54}x$

16.  $\sqrt{18}x - \frac{3}{4} = 9 - 2\sqrt{50}x$

17.  $\left(\frac{1}{2}\right)^2\left(\frac{4}{3}x - \frac{5}{2}\right) - \frac{11}{4} = \frac{10}{3} - 2x$

18.  $\frac{3}{5}x - \sqrt{12} = 3\sqrt{75} - 4x$

19.  $\left(\frac{x}{3} - \frac{5}{6}\right) - \left(\frac{3x}{4} + 1\right) = 3x - \frac{8}{3} + \frac{x}{12}$

20.  $2\sqrt{5}\left(\frac{3}{2}x - \sqrt{5}\right) = \sqrt{20}x - \frac{1}{3}$