

# Extra Practice: 5.5 Solving Equations with Fractions

Pre-Algebra

Name \_\_\_\_\_

Key

Solve each equation.

1)  $6p + \frac{4}{9} = 13\frac{7}{36}$

(36)  $6p + \frac{4}{9} \left(\frac{36}{1}\right) = \frac{475}{36} \left(\frac{36}{1}\right)$

$216p + 16 = 475$   
 $216p = 459$

$p = 2\frac{1}{8}$

3)  $\frac{5}{8}x + \frac{14}{9} = 2\frac{13}{72}$

$\frac{5}{8}x \left(\frac{72}{1}\right) + \frac{14}{9} \left(\frac{72}{1}\right) = \frac{157}{72} \left(\frac{72}{1}\right)$

$45x + 112 = 157$   
 $45x = 45$

$x = 1$

5)  $2\frac{5}{9}x + \frac{7}{9} = 5\frac{25}{54}$

$\frac{23}{9}x \left(\frac{54}{1}\right) + \frac{7}{9} \left(\frac{54}{1}\right) = \frac{295}{54} \left(\frac{54}{1}\right)$

$138x + 42 = 295$   
 $138x = 253$

$x = 1\frac{5}{6}$

7)  $-\frac{15}{8}b - 1\frac{4}{5} = -7\frac{23}{160}$

$-\frac{15}{8}b \left(\frac{160}{1}\right) - \frac{9}{5} \left(\frac{160}{1}\right) = \frac{1143}{160} \left(\frac{160}{1}\right)$

$-300b - 288 = -1143$   
 $-300b = -855$

$b = 2\frac{17}{20}$

9)  $9\frac{11}{35} = 2r + 5\frac{5}{7}$

$\frac{326}{35} \left(\frac{35}{1}\right) = 2r(35) + \frac{40}{7} \left(\frac{35}{1}\right)$

$326 = 70r + 200$   
 $126 = 70r$

$1\frac{4}{5} = r$

11)  $\frac{2}{9} + \frac{2}{3}n = -1\frac{25}{27}$

$\frac{2}{9} \left(\frac{27}{1}\right) + \frac{2}{3}n \left(\frac{27}{1}\right) = -\frac{52}{27} \left(\frac{27}{1}\right)$

$6 + 18n = -52$   
 $18n = -58$

$n = -3\frac{2}{9}$

2)  $2\frac{527}{585} = -\frac{2}{9} + 2\frac{9}{10}a$

$\frac{1697}{585} \left(\frac{585}{1}\right) = -\frac{2}{9} \left(\frac{585}{1}\right) + \frac{29}{10}a \left(\frac{585}{1}\right)$

$1697 = -130 + 1696.5a$   
 $1827 = 1696.5a$

$1\frac{1}{13} = a$

4)  $-3\frac{1}{10}m + \frac{4}{5} = -\frac{37}{70}$

$-\frac{31}{10}m \left(\frac{70}{1}\right) + \frac{4}{5} \left(\frac{70}{1}\right) = -\frac{37}{70} \left(\frac{70}{1}\right)$

$-217m + 56 = -37$   
 $-217m = -93$

$m = \frac{3}{7}$

6)  $-\frac{5}{3} - 3\frac{7}{10}x = 50\frac{2}{15}$

$-\frac{5}{3} \left(\frac{30}{1}\right) - \frac{37}{10}x \left(\frac{30}{1}\right) = \frac{752}{15} \left(\frac{30}{1}\right)$

$-50 - 111x = 1504$   
 $-111x = 1554$

$x = -14$

8)  $-\frac{4}{9}x - 2 = -1\frac{53}{81}$

$-\frac{4}{9}x \left(\frac{81}{1}\right) - 2 \left(\frac{81}{1}\right) = -\frac{134}{81} \left(\frac{81}{1}\right)$

$-36x - 162 = -134$   
 $-36x = -28$

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

10)  $-2\frac{1}{6} = \frac{1}{3} - \frac{5}{3}m$

$-\frac{13}{6} \left(\frac{6}{1}\right) = \frac{1}{3} \left(\frac{6}{1}\right) - \frac{5}{3}m \left(\frac{6}{1}\right)$

$-13 = 2 - 10m$   
 $-15 = -10m$

$1\frac{1}{2} = m$

12)  $2\frac{1}{5} - \frac{12}{7}n = 3\frac{4}{7}$

$\frac{11}{5} \left(\frac{35}{1}\right) - \frac{12}{7}n \left(\frac{35}{1}\right) = \frac{25}{7} \left(\frac{35}{1}\right)$

$77 - 60n = 125$   
 $-60n = 48$

$n = \frac{4}{5}$