

Extra Practice for Quiz on November 15, 2013

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Solve each equation.

$$1) \frac{1}{2}x - \frac{8}{5} - \frac{17}{6}x = -\frac{52}{15}$$

$$2) \frac{17}{6}a + \frac{1}{2} - \frac{23}{6}a = \frac{13}{6}$$

$$\frac{5}{5} \cdot \frac{1}{2}x - \frac{3}{3} \cdot \frac{8}{5} = -\frac{52}{15}$$

$$\frac{3}{6}x - \frac{17}{6}x = -\frac{147}{6}x$$

$$\left(-\frac{35}{15}x - \frac{24}{15} \right) = \left(-\frac{52}{15} \right) \quad \text{(all terms multiplied by 15 to "clear the fractions")}$$

$$-35x - 24 = -52$$

$$+24 \quad +24$$

$$-35x = -28$$

$$-35 \quad -35 \quad 5$$

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

$$5) -\frac{3}{2}p - \frac{5}{3}p = -\frac{13}{3} - 1\frac{1}{2}p$$

$$-\frac{19}{6}p = -\frac{13}{3} - \frac{3}{2}p$$

$$-\frac{19}{6}p = -\frac{26}{6} - \frac{9}{6}p$$

(all terms multiplied by 6
to "clear the fractions")

$$6) -\frac{9}{5}n + \frac{7}{4} = -2n + \frac{33}{20}$$

$$-\frac{9}{6}p - \frac{10}{6}p = -\frac{19}{6}p$$

$$7) -\frac{5}{2}m - \frac{7}{3}m = \frac{1}{4}m + 1 - \frac{5}{4}m + \frac{103}{12}$$

$$12 \left(-\frac{30}{12}m - \frac{28}{12}m \right) = \left(\frac{3}{12}m + \frac{12}{12} - \frac{15}{12}m \right) \quad \text{(all terms multiplied by 12 to "clear the fractions")}$$

$$-30m - 28m = 3m + 12 - 15m + 103$$

$$-58m = -12m + 115$$

$$+12m \quad +12m$$

$$-46m = 115 - 5$$

$$-46 \quad -46 \quad 2$$

$$\begin{array}{r} 1 \\ 23 \\ \times 5 \\ \hline 115 \end{array}$$

$$m = -\frac{5}{2}$$

$$8) \frac{43}{5} + \frac{1}{4}x = -\frac{5}{3}x + 4$$

$$9) -4\left(-\frac{11}{4}r + \frac{5}{2}\right) + \frac{1}{2}r = -\frac{145}{3}$$

$$\frac{44}{4}r - \frac{20}{2}$$

$$11r - 10 + \frac{1}{2}r = -\frac{145}{3}$$

$$\frac{6}{6} \cdot \frac{3}{3} \cdot \frac{2}{2} \cdot -10 + \frac{23}{2}r = -\frac{145}{3}$$

$$10) -\frac{7}{2}\left(-\frac{7}{4}x - \frac{4}{3}\right) + 2x = \frac{4153}{96}$$

$$11) \frac{8}{3}\left(\frac{14}{3}b - \frac{1}{2}\right) = -\frac{1268}{27} \cdot \frac{3}{8}$$

$$\frac{6}{6} \cdot \frac{14}{3}b - \frac{9}{9} \cdot \frac{1}{2} = -\frac{317}{18}$$

$$\frac{84}{18}b - \frac{9}{18} = \left(-\frac{317}{18}\right)$$

$$84b - 9 = -317$$

+9

+9

$$\frac{84b}{84} = -\frac{308}{84} \quad \frac{154}{42} \quad \frac{77}{21} \quad \frac{11}{3}$$

$$b = -\frac{11}{3}$$

$$12) \frac{1087}{24} = \frac{11}{4}\left(-\frac{7}{2}n + \frac{5}{4}\right) - \frac{7}{3}n$$

Answers to Extra Practice for Quiz on November 15, 2013

$$1) \left\{ \frac{4}{5} \right\}$$

$$2) \left\{ -\frac{5}{3} \right\}$$

$$3) \left\{ \frac{8}{3} \right\}$$

$$4) \{-1\}$$

$$5) \left\{ \frac{13}{5} \right\}$$

$$6) \left\{ -\frac{1}{2} \right\}$$

$$7) \left\{ -\frac{5}{2} \right\}$$

$$8) \left\{ -\frac{12}{5} \right\}$$

$$9) \left\{ -\frac{10}{3} \right\}$$

$$10) \left\{ \frac{19}{4} \right\}$$

$$11) \left\{ -\frac{11}{3} \right\}$$

$$12) \left\{ -\frac{7}{2} \right\}$$