Solve each equation.

1) $-\frac{7}{3}\left(x+\frac{3}{2}\right)=\frac{1}{3}\left(\frac{1}{3}x-2\right)+1$

2) $-\frac{3}{2}\left(-\frac{7}{2}n+\frac{1}{3}\right)=\frac{1}{3}\left(-\frac{4}{3}n+1\right)$

3) $\frac{8}{3}a-\frac{7}{2}a=\frac{5}{2}\left(-2a+\frac{5}{2}\right)+\frac{2}{3}\left(a-\frac{5}{3}\right)$

4) $-\frac{1}{3}\left(\frac{4}{3}k+1\right)=-\frac{5}{2}\left(-\frac{3}{2}k+1\right)+\frac{2}{3}k$

5) $\frac{1}{3}\left(\frac{3}{2}p+\frac{3}{2}\right)-\frac{10}{3}\left(\frac{3}{2}p+2\right)=\frac{5}{2}p+\frac{1}{2}p$

6) $2\left(-x-\frac{1}{2}\right)=-\frac{10}{3}\left(-\frac{5}{2}x+\frac{1}{2}\right)+2x$

7) $\frac{1}{3}\left(-3n-\frac{1}{2}\right)=\frac{5}{3}\left(\frac{1}{2}n-\frac{2}{3}\right)$

8) $\frac{2}{3}\left(m-\frac{11}{3}\right)=\frac{6m-31}{9}$

9) $-\frac{4}{3}\left(\frac{2}{3}p+1\right)=\frac{1}{2}\left(\frac{8}{3}p-\frac{5}{2}\right)+\frac{8}{3}$

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

11) $-\frac{7}{2}\left(-\frac{11}{3}n-1\right)=\frac{8}{3}\left(\frac{1}{2}n+1\right)$

12) $-\frac{5}{2}+2\left(-\frac{11}{3}b-\frac{8}{3}\right)=-\frac{10}{3}\left(\frac{3}{2}b+1\right)$

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

14) $-1+\frac{3}{2}\left(x+\frac{2}{3}\right)=\frac{4}{3}\left(-\frac{11}{3}x+2\right)$

15) $-\frac{5}{2}n+1+\frac{2}{3}n=-\frac{11}{3}\left(\frac{5}{3}n+\frac{1}{2}\right)-\frac{5}{2}\left(-n+\frac{1}{3}\right)$

Answers to

1) $\left\{-\frac{69}{44}\right\}$

2) $\left\{\frac{6}{41}\right\}$

3) $\left\{\frac{185}{126}\right\}$

4) $\left\{\frac{78}{175}\right\}$

5) $\left\{-\frac{37}{45}\right\}$

6) $\left\{\frac{2}{37}\right\}$

7) $\left\{\frac{17}{33}\right\}$

8) No solution.

9) $\left\{-\frac{99}{80}\right\}$

10) $\left\{\frac{4}{13}\right\}$

11) $\left\{-\frac{5}{69}\right\}$

12) $\left\{-\frac{27}{14}\right\}$

13) $\left\{\frac{21}{52}\right\}$

14) $\left\{\frac{48}{115}\right\}$

15) $\left\{-\frac{33}{16}\right\}$