

Solve each equation.

1) $\frac{8}{3}\left(-\frac{3}{2}n - \frac{3}{2}\right) + 3\left(-\frac{4}{3}n + \frac{1}{2}\right) = \frac{7}{3}n - \frac{3}{2}n$

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

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

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

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

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

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

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

9) $-3\left(\frac{5}{3}n - \frac{5}{3}\right) = \frac{2}{3}\left(-\frac{7}{3}n + 1\right) + 1$

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

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

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

13) $-\frac{1}{2}\left(2x + \frac{8}{3}\right) + \frac{3}{2} = \frac{1}{2}x - 2\left(x + \frac{3}{2}\right)$

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

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

Answers to

1) $\left\{-\frac{15}{53}\right\}$

2) $\left\{-\frac{45}{148}\right\}$

3) $\{0\}$

4) $\{31\}$

5) $\left\{\frac{71}{62}\right\}$

6) $\left\{-\frac{29}{12}\right\}$

7) $\left\{\frac{10}{41}\right\}$

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

9) $\left\{\frac{30}{31}\right\}$

10) $\left\{-\frac{15}{121}\right\}$

11) $\left\{\frac{4}{7}\right\}$

12) $\left\{-\frac{37}{36}\right\}$

13) $\left\{-\frac{19}{3}\right\}$

14) $\left\{-\frac{36}{7}\right\}$

15) $\left\{\frac{15}{22}\right\}$