Two Step Equations Using Combined Rules with Emphasis on Decimals and Fractions

Goal: 1) To isolate the variable terms from the constant terms using the addition axiom.

2) To get the coefficient of the variable term equal to 1 by multiplying both sides of the equation by the reciprocal of the coefficient of the variable.

Example:

$\frac{2}{5}x + \frac{3}{5} = \frac{4}{5}$ Subtract $\frac{3}{5}$ from both sides of the equation.

$\frac{2}{5}x + \frac{3}{5} - \frac{3}{5} = \frac{4}{5} - \frac{3}{5}$

$\frac{2}{5}x = \frac{1}{5}$

Multiply both sides of the equation by the reciprocal of the coefficient.

$\frac{5}{2} \bullet \frac{2}{5}x = \frac{1}{5} \bullet \frac{5}{2}$

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

Problems:

1) $\frac{2}{3}h + 1 = -4\frac{1}{3}$

2) $\frac{1}{2}y - 1\frac{1}{2} = 1$

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

4) $0.5x + 1.01 = -3.5$

5) $0.2s - 0.4 = 0.2$

6) $0.75 - 0.5y = -4$

1) –8 3) –25 $^1/_2$ 5) 3

2) 5 4) –9.02 6) 9.5

7) $3.87m + 2.71 = 18.19$

8) $-\frac{5}{9}x + 2 = \frac{1}{3}$

9) $\frac{1}{3}b + 4\frac{1}{2} = -7\frac{1}{2}$

10) $19.75s - 15.02 = 46.6$

11) $-12.1 - 1.03d = -1.697$

12) $\frac{x}{7} + \frac{1}{2} = \frac{1}{24}$

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

14) $1.57 + 1.3e = 9.812$

15) $-3.12 - 1.27m = -0.5546$

16) $\frac{x}{2} + \frac{1}{4} = \frac{1}{16}$

17) $-\frac{1}{3}t - \frac{1}{3} = \frac{1}{9}$

18) $-2.17r - 15.7 = 4.047$

7) 4
8) 3
9) -36
10) 3.12
11) -10.1
12) $-3\frac{5}{24}$
13) 1
14) 6.34
15) -2.02
16) $-\frac{3}{8}$
17) $-\frac{4}{3}$
18) -9.1