

Equations (No Solution/One Solution/Identity)

Name _____

In questions 1-4, the last line of work in solving an equation is shown.

Circle NS if the equation has no solution, OS if there is one solution, or ID if it is an identity with infinite solutions.

1) $6 = 6$ NS OS ID 3) $1 = -1$ NS OS ID

2) $0 = x$ NS OS ID 4) $x = x$ NS OS ID

Solve each equation. Be sure to show all work clearly. Circle whether it is a NS, OS, or ID situation. If there is one solution, enter it into the blank provided.

5) $8x - 6 = 2(x - 3) + 6x$ NS OS; x = ____ ID	6) $2(11 - 3x) = 9x + 10 - 3x$ NS OS; x = ____ ID	7) $0 = 10x - (7 + 10x)$ NS OS; x = ____ ID
8) $2 + 5x - 17 = 12x - 11 - 7x$ NS OS; x = ____ ID	9) $\frac{1}{2}x + 40 = 40 - \frac{1}{2}x$ NS OS; x = ____ ID	10) $3x - 2 + 21 = 2(9.5 + x) + x$ NS OS; x = ____ ID

Objective: Students will solve equations involving no solution, one solution, or identity.