Equations, Inequalities and Solutions

Overview of problems

Example Set: A

An open sentence must have a variable?

An equation or inequality can be false?

Every equation has only one solution?

How many solutions does an inequality have?

Example Set: B

Determine if the equation is true, false or an open sentence

$2(3+1) = 5+3$

$8[7(5-3)] = 100-12$

$x + 10 = 14$

Example Set: C

Check if the given number is a solution

$6x + 1 = 14, \quad 2$

$\frac{x}{5} = 4, \quad 20$

$4x + 2 = 8 + 2x, \quad 3$

$x - 9 \leq 5, \quad 15$

$7 + 2y < 8 - y, \quad 6$

$2x^2 - 6x + 4 = 0, \quad 1, 2$

Equations, Inequalities and Solutions

Overview of problems- KEY

Example Set: A

An open sentence must have a variable? True

An equation or inequality can be false? True

Every equation has only one solution? Depends, some equations have many solutions or none.

How many solutions does an inequality have?

infinite many

Example Set: B

Determine if the equation is true, false or an open sentence

$2(3+1) = 5+3$

True equation

$8[7(5-3)] = 100-12$

False equation

$x + 10 = 14$

open sentence

Example Set: C

Check if the given number is a solution

$6x + 1 = 14$, 2 Not a solution

$\frac{x}{5} = 4$, 20 solution

$4x + 2 = 8 + 2x$, 3 solution

$x - 9 \leq 5$, 15 not a solution

$7 + 2y < 8 - y$, 6 not a solution

$2x^2 - 6x + 4 = 0$, 1, 2 solutions