MATH 1314
Chapter 1.1: Linear Equations and Rational Equations

LINEAR EQUATION IN ONE VARIABLE: $ax+b=0$

IS	IS NOT
$5x+35=0$	$5x^2+35=0$
$\frac{x}{4}-5=0$	$\frac{4}{x}-5=0$
$3x+4=7$	$3x+4y=7$
$0.7x-0.8=0.1$	$0.7x-0.8-0.1$

SOLUTION

PROPERTIES OF EQUALITY: ADDITION MULTIPLICATION

SOLVE.

$-3(w-4)+5=10-(w+1)$

$\frac{m-2}{5}-\frac{m-4}{2}=\frac{m+5}{15}+2$

SHOULD A COUPLE BUY A USED CAR FOR $8800 OR LEASE A NEW CAR FOR $2500 PLUS MONTHLY PAYMENTS OF $225?

SOLVE.

$3(2X-1) = 2(3X-2)$ $3(2X-1) = 2(3X-2)+1$ $3(2X-1) = 5X-4$

$\frac{12}{X} = \frac{6}{2X}+3$ $\frac{X}{X-4} = \frac{4}{X-4} - \frac{4}{5}$

$$\frac{6}{x^2+8x+15} - \frac{2}{x+3} = \frac{-4}{x+5}$$

SOLVE:

$d = rt$ FOR t

$3x + 2y = 6$ FOR y

$A = \frac{1}{2}h(B+b)$ FOR B

$ax + by = cx + d$ FOR x