NAME _____ HW # 7

Solve each equation below and show a check.

1.	$8x + 2 = 2x - 22$ $-2x \quad -2x$ $6x + 2 = -22$ $-2 \quad -2$ $\frac{6x}{6} = \frac{-24}{6}$ $\boxed{x = -4}$	**Check** $8x + 2 = 2x - 22$ $8(-4) + 2 = 2(-4) - 22$ $-32 + 2 = -8 - 22$ $-30 = -30$ ✓
2.	$2(x - 10) = 3x + 8 + 3x$ $2x - 20 = 6x + 8$ $-6x \quad -6x$ $-4x - 20 = 8$ $+20 \quad +20$ $\frac{-4x}{-4} = \frac{28}{-4}$ $\boxed{x = -7}$	**Check** $2(x-10) = 3x + 8 + 3x$ $2(-7-10) = 3(-7) + 8 + 3(-7)$ $2(-17) = -21 + 8 + -21$ $-34 = -34$ ✓
3.	$7(2x - 3) = 13x - 21$ $14x - 21 = 13x - 21$ $-13x \quad -13x$ $x - 21 = -21$ $+21 \quad +21$ $\boxed{x = 0}$	**Check** $7(2x-3) = 13x - 21$ $7(2(0)-3) = 13(0) - 21$ $7(0-3) = 0 - 21$ $7(-3)$ $-21 = -21$ ✓

1. -3

4. The charges for an international call made using a calling card for two companies are shown in the table below.

Phone Company	Charges
Company A	$0.35 plus $0.35 per minute
Company B	$0.45 plus $0.02 per minute

m = # of minutes

a. Write an expression to represent Company A's charges.

$0.35m + 0.35$

b. Write an expression to represent Company B's charges.

$0.02m + 0.45$

c. What is the length of a phone call that would make both company's charge the same amount? Write an equation to solve.

$0.35m + 0.35 = 0.02m + 0.45$
$-0.02m \quad -0.02m$
$0.33m + 0.35 = 0.45$
$-0.35 \quad -0.35$
$\frac{0.33m}{0.33} = \frac{0.10}{0.33}$
$\boxed{m = 0.\overline{30}}$

$0.33\overline{)0.10}$
$33\overline{)10.000}$ $0.30303\ldots$
-99
100

The phone call is approximately 0.30 minutes