2.1 Coin and Mixture Problems - Day 2

1. Betty buys some pens and pencils. She buys 7 more pens than pencils. Pens cost $.45 each and pencils cost $.40 each. If she spends $9.95, how many of each can she buy?

let x = # of pencils (.40)

$x+7$ = # of pens (.45)

Value of pencils + Value of pens = 9.95

$.40x + .45(x+7) = 9.95$

$.40x + .45x + .45(7) = 9.95$

$.40x + .45x + 3.15 = 9.95$

$.85x + 3.15 = 9.95$

$.85x = 9.95 - 3.15$

$.85x = 6.80$

$x = \frac{6.80}{.85}$

$x = 8$

8 pencils
15 pens

$x+7$
$8+7$
15

2. An adult ticket to a football game was $1.75. A student ticket was $1.25. The number of student tickets sold was twice the number of adult tickets. The total from the ticket sales was $850. How many adult tickets were sold?

let x = # of adult tickets (1.75)

$2x$ = # of student tickets (1.25)

Value adult tickets + Value student tickets = 850

$1.75(x) + 1.25(2x) = 850$

$1.75x + 2.50x = 850$

$3.75x = 850$

$x = \frac{850}{3.75}$

$x = 200$

200 adult tickets

HOMEWORK

Worksheet - HW 2.1 - Coin & Mixture Day 2