Name: _____

Consecutive Integer, Coin/Stamp, Investment ** (& Mixture for Level III only) Practice quiz

1) Sally has 21 coins in nickels and dimes. Their total value is $1.75. How many of each coin does she have?

2) Find 3 consecutive odd integers such that three times the first integer is one less than the sum of second and third integers.

3) The club treasurer split $2400 into two simple interest accounts. One earns 6.75% while the other earns 9.45%. How much was deposited into each account, if the interest earned on both accounts is the same?

<u> Level III quiz only **</u>**

4) In order to complete her science experiment, Merrie needs 20 liters of a solution which is 25% alcohol. The only two alcohol solutions available in the school laboratory is one which is 40% alcohol and another which is 15% alcohol. How many liters of each of these two solutions must she mix together to produce the required solution?

Name: Mr B

Consecutive Integer, Coin/Stamp, Investment ** (& Mixture for Level III only) Practice quiz

1) Sally has 21 coins in nickels and dimes. Their total value is $1.75. How many of each coin does she have?

Let x = # of nickels
let $21-x$ = # of dimes.

$.05x + .10(21-x) = 1.75$ (100)

$5x + 10(21-x) = 175$

$5x + 210 - 10x = 175$

$-5x + 210 = 175$

$-210 \quad -210$

$\frac{-5x}{-5} = \frac{-35}{-5}$

$x = 7$

Sally has 7 nickels and 14 dimes.

2) Find 3 consecutive odd integers such that three times the first integer is one less than the sum of second and third integers.

let x = 1st C.O.I.
let $x+2$ = 2nd C.O.I.
let $x+4$ = 3rd C.O.I.

$3(x) = (x+2+x+4) - 1$

$3x = 2x + 6 - 1$

$3x = 2x + 5$

$-2x \quad -2x$

$x = 5$

The integers are 5, 7, 9.

3) The club treasurer split $2400 into two simple interest accounts. One earns 6.75% while the other earns 9.45%. How much was deposited into each account, if the interest earned on both accounts is the same? (same means equal)

let x = amt @ 6.75%
let $(2400-x)$ = amt @ 9.45%

$.0675x = .0945(2400-x)$

$.0675x = 226.8 - .0945x$

$+.0945x \quad +.0945x$

$\frac{.162x}{.162} = \frac{226.8}{.162}$

$x = 1400$

They invested $1400 at 6.75% and $1000 at 9.45%

**** Level III quiz only ****

4) In order to complete her science experiment, Merrie needs 20 liters of a solution which is 25% alcohol. The only two alcohol solutions available in the school laboratory is one which is 40% alcohol and another which is 15% alcohol. How many liters of each of these two solutions must she mix together to produce the required solution?

40%	+	15%	=	25%
x		$20-x$		20

$40x + 15(20-x) = 25(20)$

$40x + 300 - 15x = 500$

$25x + 300 = 500$

$-300 \quad -300$

$\frac{25x}{25} = \frac{200}{25}$

$x = 8$

She needs 8 liters of 40% & 12 liters of 15%