Notes:

Consecutive Integer Word Problems

Created for you by Ms. Nhotsoubanh

Definitions:

1. Consecutive Integers: are numbers that follow each other in order. They have a difference of 1 between every 2 numbers.

Example: $4, \overset{+1}{5}, \overset{+1}{6}, \overset{+1}{7}, \ldots$

algebra: $x, x+1, x+2, \ldots$

2. Consecutive odd integers: are odd numbers that follow each other. They have a difference of 2 between every 2 numbers.

Example: $5, \overset{+2}{7}, \overset{+2}{9}, \overset{+2}{11}, \ldots$

algebra: $x, x+2, x+4, \ldots$

3. Consecutive even integers: are even numbers that follow each other. They have a difference of 2 between every 2 numbers.

Example: $10, \overset{+2}{12}, \overset{+2}{14}, \overset{+2}{16}, \ldots$

algebra: $x, x+2, x+4, \ldots$

Name: Key

Math 7H – Nov. 13

glue on page 3

use pages #4-7

Why Did They Arrest the Automobile Factory Worker?

Solve each problem below and find your solution at the bottom of the page. Write the letter of that problem in the box above the solution.

(E) Find two consecutive integers whose sum is 45.

(A) Find two consecutive integers whose sum is −29.

(B) Find three consecutive integers whose sum is 48.

(O) Find three consecutive integers whose sum is −147.

(E) Find two consecutive even integers whose sum is 66.

(A) Find three consecutive even integers whose sum is 72.

(K) Find two consecutive odd integers whose sum is −88.

(H) Find four consecutive odd integers whose sum is 56.

(O) Find two consecutive even integers such that the sum of the larger and twice the smaller is 62.

(T) Find three consecutive even integers such that the sum of the smallest and the largest is 36.

(K) Find three consecutive odd integers such that the sum of the smallest and 4 times the largest is 61.

$x + 4(x+4) = 61$

(R) Find three consecutive integers such that the sum of twice the smallest and 3 times the largest is 126.

	H	e		t	o	o	k		a			r	a	k	e	
14, 15, 16	11, 13, 15, 17	22, 23	−51, −52, −53	16, 18, 20	−50, −49, −48	20, 22	−45, −43	13, 15, 17, 19	22, 24, 26	24, 26, 28	15, 16, 17	24, 25, 26	−15, −14	9, 11, 13	32, 34	11, 13, 15

Nov. 13

Notes: Consecutive Integer Word Problems

E 1.) Let 1st CI = x = 22 (ans)
2nd CI = $x+1$ = 23

Equation: $x + x + 1 = 45$

$2x + 1 = 45$

$-1 \quad -1$

$\frac{2x}{2} = \frac{44}{2}$

$x = 22$

$x + 1 =$

$22 + 1 = 23$

A 2.) Let 1st CEI = x = 22 (ans)
2nd CEI = $x+2$ = 24
3rd CEI = $x+4$ = 26

Equation: (1st) + (2nd) + (3rd) $(x) + (x+2) + (x+4) = 72$

$3x + 6 = 72$

$-6 \quad -6$

$\frac{3x}{3} = \frac{66}{3}$

$x = 22$

$x + 2$

$22 + 2 = 24$

$x + 4$

$22 + 4 = 26$

O 3) Let 1st CEI = x = 20 ans
2nd CEI = $x+2$ = 22
twice

Equation: $(x+2)+2x=62$

$3x+2=62$

$-2 \quad -2$

$\frac{3x}{3} = \frac{60}{3}$

$x = 20$

$x+2 =$

$20+2=22$

K 4.) Let 1st COI = x = 9 ans
2nd COI = $x+2$ = 11
3rd COI = $x+4$ = 13
4 times

Equation: $x + 4(x+4) = 61$

$x+4x+16=61$

$5x+16=61$

$-16 \quad -16$

$\frac{5x}{5} = \frac{45}{5}$

$x = 9$

$x+2$

$9+2=11$

$x+4$

$9+4=13$

substitute