

■ **LINEAR EQUATIONS IN ONE UNKNOWN** ■

Form 1 Summer Course

Vol 1 – CH3

Part 6 - Number Problem

1. $4x + 8 = 44$

$4x = 36$

$x = 9$

3. Let x be the number.

$42 - 2x = 4(6 - x)$

$42 - 2x = 24 - 4x$

$2x = -18$

$x = -9$

The number is -9 .

5. Let x be the number.

$7(x - 6) = 91$

$x - 6 = 13$

$x = 19$

The number is 19.

7. Let x be the smallest number.

$x + x + 2 + x + 4 = 72$

$3x + 6 = 72$

$3x = 66$

$x = 22$

The numbers are 22, 24 and 26.

9. $\frac{1+y}{6} = \frac{1}{2}$

$1 + y = 3$

$y = 2$

11. Let x be the unit digit.

$10(3x) + x = 10x + 3x + 36$

$30x + x = 13x + 36$

$18x = 36$

$x = 2$

The original number is 62.

Part 7 - 2 Parties Problem

2. Let x be the amount of Kate has.

$$x + 3x = 320$$

$$4x = 320$$

$$x = 80$$

Kate has \$80 and Christy has \$240.

3. Let x be the number of \$2 coins.

$$2x + 5(x + 6) = 128$$

$$2x + 5x + 30 = 128$$

$$7x = 98$$

$$x = 14$$

The total number of coins = $14 + 14 + 6 = 34$

4. Let x be the number of oranges bought.

$$4(2x) + 5x = 130$$

$$8x + 5x = 130$$

$$13x = 130$$

$$x = 10$$

The number of apples is 20.

Part 8 - Age Problem

4. Let x be the man's age now.

$$(x+2) + \frac{1}{2}(x-22+2) = 55$$

$$2(x+2) + (x-22+2) = 110$$

$$2x+4+x-22+2=110$$

$$3x=126$$

$$x=42$$

He is 42 now.

5. Let x be the age of Harry now.

$$(x-5) + (x-5-5) = 25$$

$$x-5+x-5-5=25$$

$$2x-15=25$$

$$2x=40$$

$$x=20$$

Harry is 20 years old now.

6. Let x be the man's age now.

$$(x+2) + (x-32+2) = 62$$

$$x+2+x-32+2=62$$

$$2x-28=62$$

$$2x=90$$

$$x=45$$

The man is 45 now.