Section 7.8 Dec. 5

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17. Given: Sum of 2 numbers is 46.
One number is 12 more than the other

Find: the numbers
the smaller number
the larger number

Let x = the smaller number

Then $x+12$ = the larger number

$x + x + 12 = 46$

$2x + 12 = 46$

$2x = 34$

$x = 17$

$\therefore$ the numbers are 17 and 29.

20. ~~Given: The~~ sum of 3 consecutive numbers is 105.

Find : the numbers

Let x — the first number

then let $x+1$ = the 2nd number

and let $x+2$ = the 3rd number

$$x + x + 1 + x + 2 = 105$$
$$3x + 3 = 105$$
$$3x = 102$$
$$x = 34$$

∴ The numbers are 34, 35, 36.

23. Given: Canadian women's hockey team scored 35 more goals than were scored against them. Total goals was 41.

Find: how many goals scored and scored against

Let x = goals scored against Canada

Then let $x+35$ = goals scored

$x + x + 35 = 41$

$2x + 35 = 41$

$2x = 6$

$x = 3$

∴ Canada scored 38 goals and 3 were scored against.

28. Given: Aretha has $0.85 in nickels and dimes
she has 2 more nickels than dimes

Find: how many nickels & dimes does she have

	Value
dimes: x	$0.10x$
nickels: $x+2$	$0.05(x+2)$

Let x = the number of dimes
then $x+2$ = # of nickels

$$0.10x + 0.05(x+2) = 0.85$$
$$0.10x + 0.05x + 0.10 = 0.85$$
$$0.15x + 0.10 = 0.85$$
$$0.15x = 0.75$$
$$\frac{0.15x}{0.15} = \frac{0.75}{0.15} \rightarrow x = 5$$

∴ she has 5 dimes & 7 nickels

31. Given: The sum of 2 numbers is 39. Twice the first number plus 3 times the second is 101.

Find: the numbers

Let x = the first number

Then $(39-x)$ = the second number

$2x + 3(39-x) = 101$

$2x + 117 - 3x = 101$

$-x + 117 = 101$

$-x = -16$

$x = 16$

the first number is 16 and the second number is 23.

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