Section 7.7 Dec. 3, 2012

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20. Given: 16 more white than black keys on piano. Total 88 keys (2C)

(1T) Find: how many of each are there?

(2T) Let x = # of black keys

Then let $x+16$ = # of white keys

(3A) $x + x + 16 = 88$

$2x + 16 = 88$

$2x = 72$

$x = 36$

$\therefore$ there are 36 black keys and 52 white keys (1C)

22.

Given: Mike is 7 yrs older than Ayla

Sum of their ages is 29.

Find: how are they?

Let x = Ayla's age

then let $x+7$ = Mike's age

$x + x + 7 = 29$

$2x + 7 = 29$

$2x = 22$

$x = 11$

$\therefore$ Ayla is 11 yrs old & Mike is 18

24. Given: the population of Japan is 4.2 times Canada's pop. The sum of the 155 million people

Find: their populations

Let x = Canada's population

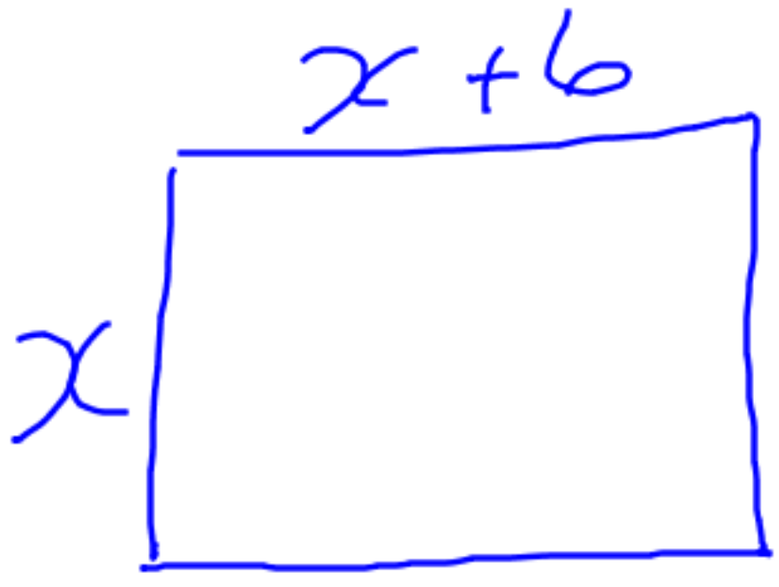
Then let $4.2x$ = Japan's population

$x + 4.2x = 155\,000\,000$ ∴ Canada's pop was 29.8 million

$5.2x = 155\,000\,000$

$x = 29\,807\,692.31$

25 a) Given:



$P = 36\text{cm}$

Find: the dimensions

Let x = the width

then let $x+6$ = length

$P = 2w + 2L$

$36 = 2x + 2(x+6)$

$36 = 2x + 2x + 12$

$36 = 4x + 12$

$24 = 4x$

$x = 6$

∴ The width is 6cm & the length is 12cm

P. 366 Solving Problems Using Equations

1. Given: the sum 2 #s is 35.

Find: the #'s

Let x = the first number

then let $35 - x$ = the 2nd #

4. Given: the length and width of a rectangle total 36cm

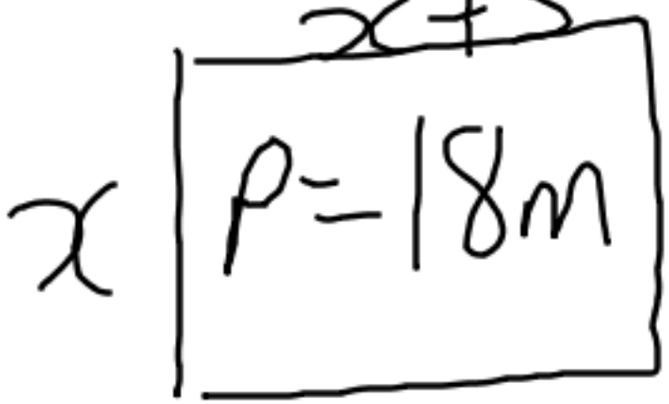
Find: the dimensions

Let x = the width

then let $36 - x$ = the length

8. Given: Parking Meter has 246 coins in quarters + dimes
Find: how many of each coin?
Let x = the # of dimes
then let $246 - x$ = the # of quarters

11. Given:



$P = 2w + 2L$

$18 = 2x + 2(x+3)$

$18 = 2x + 2x + 6$

$18 = 4x + 6$

$\frac{12}{4} = \frac{4x}{4}$

$x = 3$

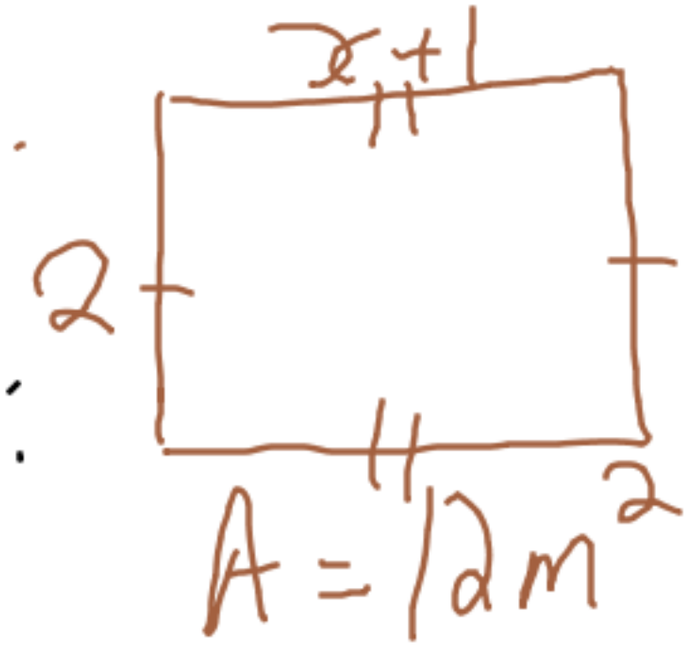
Find: the dimensions

Let x = the width

then let $x+3$ = the length

∴ The width 3 m and the length 6 m ☺

13.



Given:

$A = L \times w$

$A = 2(x+1)$

$12 = 2x + 2$

$10 = 2x$

$x = 5$

Find the dimensions

Let $x+1$ = the length

$\therefore$ the length is 6 m.

first box 6, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18

↳ 21, 23, 25b, 26 a, b

Proper format

p. 366 2, 3, 5, 6, 7 — Find

↳ Let statements

9, 10, 12, 14 full solutions

hand-out sheet - words to math

Given

1. $12+n$