

Algebra I

3-6

Problem Solving Using Charts

1) Find the number of full 8 hour shifts that Maria worked last month.

(1) She worked twice as many 6 hour shifts as 8 hour shifts.

(2) She worked a total of 280 hours. (pg 122)

Let $x = \#$ 8hr shifts

	# shifts	hrs/shift	total
6hr shifts	$2x$	6	$12x$
8hr shifts	x	8	$8x$

$$12x + 8x = 280$$

$$\frac{20x}{20} = \frac{280}{20}$$

$$x = 14$$

3) Find the total weight of the boxes of pecans in a shipment of 3 lb boxes of pecans and 2 lb boxes of walnuts.

(1) There were 24 fewer 2 lb boxes of walnuts than 3 lb boxes of pecans.

(2) The total weight of the shipment was 462 lb.

Let $x = \#$ boxes of pecans
 $x - 24 = \#$ boxes of walnuts

	# boxes	wt/box	total
pecans	x	3	$3x$
walnuts	$x - 24$	2	$2(x - 24)$

$$3x + 2(x - 24) = 462$$

$$3x + 2x - 48 = 462$$

$$5x - 48 + 48 = 462 + 48$$

$$\frac{5x}{5} = \frac{510}{5}$$

$$x = 102$$

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