

Answer on Question #77242 – Math – Algebra

Question

Three bags of wheat, two bags of corn, and one bag of oats weigh the same as one bag of wheat, one bag of corn and five bags of oats. If two bags of corn and one bag of oats weighs 26 pounds and one bag of corn weighs 10 pounds, how much does one bag of wheat weigh?

Solution

Note the bag of wheat as W , the bag of corn as C , and the bag of oats as T

Find the weight of one bag of oats:

$$2C + T = 26$$

$$C = 10, \text{ by condition}$$

$$T = 6$$

Let's write equation:

$$3W + 2C + T = W + C + 5T, \text{ by condition}$$

$$C = 10, T = 6$$

$$3W + 20 + 6 = W + 10 + 30$$

Let's simplify:

$$3W + 26 = W + 40$$

$$2W = 14$$

$$W = 7$$

Answer: The weight of one bag of wheat is 7 pounds.