

Group Activities:

1. Patsy works for a non-profit organization that is selling candy to raise money for charity. The group buys large bags of foil-wrapped chocolate eggs and bundles them into small bags of 50. When Patsy begins to count out the eggs, it is very time-consuming. So she invents a faster method. She counts out 50 eggs and uses her kitchen scale to weigh them. Fifty eggs weigh 6.25 grams. Her scale has a built-in bowl, so she can drop a handful of eggs onto the empty scale and add eggs a few at a time until she has 6.25 grams. Voila! Easy and fast!

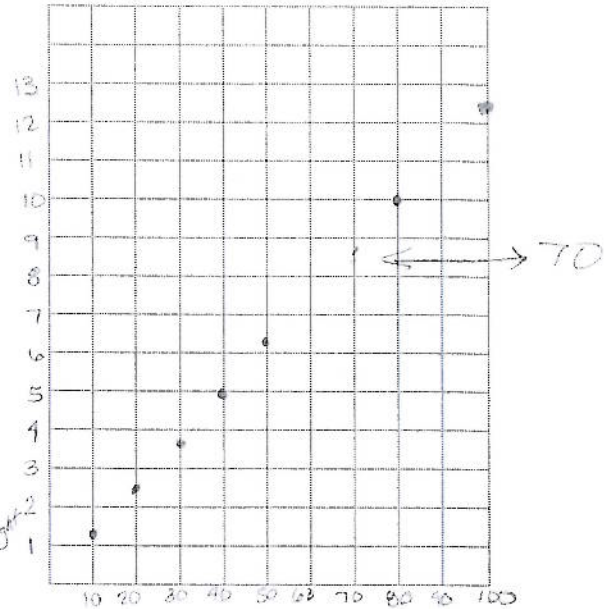
a. What has to be true about the chocolate eggs if Patsy's method works?

All the eggs must weigh the same.

b. Model this situation with a table, an equation, and a graph.

Number of eggs	Weight in grams
0	0
10	1.25
20	2.50
30	3.75
40	5
50	6.25
80	10
100	12.5
n	.125n
70	8.75

.125 gr each



c. Do your models suggest that weight is proportional to the number of eggs? How do you know? Why does this make sense?

Yes, because it's linear.

d. Use your graph and your formula to determine the weight of 70 eggs. Show your work and mark the graph to demonstrate your process. *8.75*

Use a ratio-proportion or unit analysis to check your work.

$$\frac{70}{x} = \frac{50}{6.25} \quad 50x = 437.5 \quad = x = 8.75$$

e. To answer the original question, if a handful of eggs weighs 7 grams, how many eggs need to be removed? Check your answer by solving the problem using a different method.

75 ÷ .125 = 600 need to be removed

7 ÷ .125 = 56

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