A frequency distribution is shown below. Complete parts (a) through (e).

The number of dogs per household in a small town.

Dogs 0 1 2 3 4 5

Households 1185 425 163 45 28 15

|  |  |
| --- | --- |
| x | P(x) |
| 0 |   |
| 1 |   |
| 2 |   |
| 3 |   |
| 4 |   |
| 5 |   |

1. Use the frequency distribution to construct a probability distribution.

(round to the nearest thousandth as needed)

1. Find the mean of the probability distribution.

µ = \_\_\_\_ (round to the nearest tenth as needed)

1. Find the variance of the probability distribution.

o² = \_\_\_\_ (round to the nearest tenth as needed)

1. Find the standard deviation of the probability distribution.

\_\_\_\_ (round to the nearest tenth as needed)

1. Interpret the results in the context of the real-life situation. (choose the correct option below)

\_\_\_ A household on average has 0.6 dog with a standard deviation of 15 dog.

\_\_\_ A household on average has 1.0 dog with a standard deviation of 0.6 dog.

\_\_\_ A household on average has 0.9 dog with a standard deviation of 1.0 dog.

\_\_\_ A household on average has 0.6 dog with a standard deviation of 1.0 dog.