

Name: _____

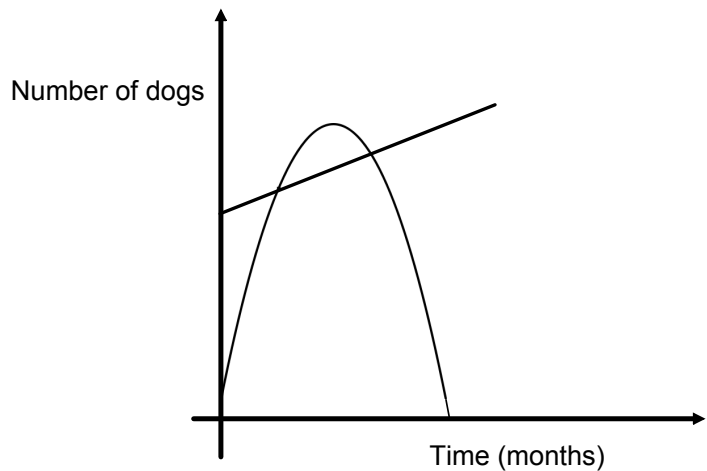
Math 4111 Quiz: Word Problem Involving Solving a System of Equations

Over a 30-month period a government worker tracks the population of dogs at two different urban shelters.

The number of dogs present at Shelter A over the period is represented by a parabola. At the beginning of the period there are only 8 dogs at the shelter. The number of sheltered dogs at Shelter A reaches a peak of 116 dogs after 12 months.

The variation in the number of dogs at Shelter B is represented by a straight line. The initial number of dogs here is 80; after 16 months, the number increased by 30%.

Determine the number of months in which there were more dogs at Shelter A than at Shelter B.



Answer: _____