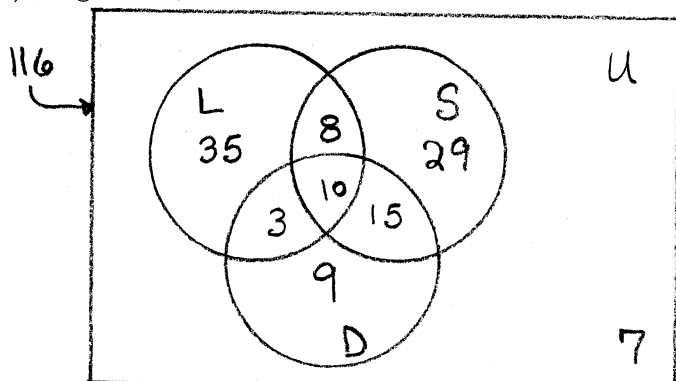# Math 200 - Quiz 4

Name __key__

February 23, 2011

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (5 points) In a survey of 116 dog owners, the following information was obtained.

   - 56 like large dogs
   - 62 like small dogs
   - 37 like dinky dogs
   - 18 like small dogs or large dogs
   - 25 like small dogs or dinky dogs
   - 13 like large dogs or dinky dogs
   - 10 like all three sizes of dogs

   (a) Organize the information in a three-set Venn diagram.

SET OF LARGE DOGS = L

SET OF SMALL DOGS = S

SET OF DINKY DOGS = D

   (b) How many people surveyed like none of these sizes of dogs?

$$116 - (35 + 8 + 29 + 3 + 10 + 15 + 9)$$

$$= 116 - 109 = \boxed{7}$$

   (c) How many people surveyed like only large dogs?

$$\boxed{35}$$

   (d) How many people surveyed like only one of these sizes of dogs?

$$35 + 29 + 9 = \boxed{73}$$