

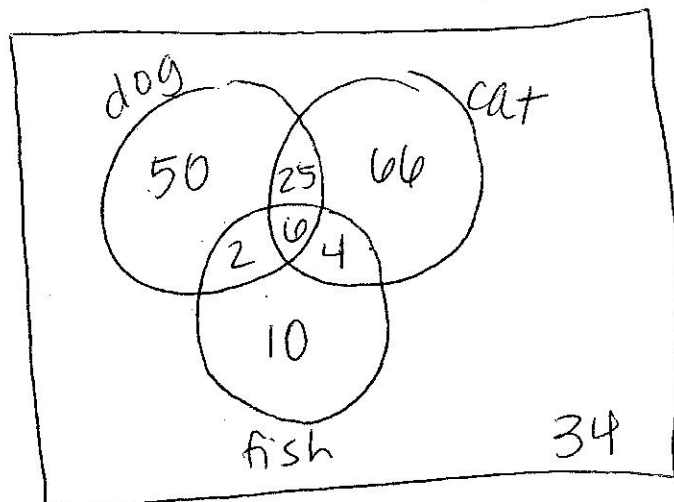
key

Math 150 Quiz 5

1. A pet store keeps track of the purchases of customers over a four-hour period. The store manager classifies purchases as containing a dog product, a cat product, a fish product, or a product for a different kind of pet. She found that:

- 83 customers purchased a dog product;
- 101 customers purchased a cat product;
- 22 customers purchased a fish product;
- 31 customers purchased a dog and a cat product;
- 8 customers purchased a dog and a fish product;
- 10 customers purchased a cat and a fish product;
- 6 customers purchased a dog, a cat, and a fish product;
- 34 customers purchased a product for a pet other than a dog, cat, or fish.

Use this information to draw an appropriate Venn diagram.



2. Insert \cap or \cup to make each statement true.

- a) $\{5, 7, 9, 19\} \cap \{7, 9, 11, 15\} = \{7, 9\}$
- b) $\{2, 1, 7\} \cup \{1, 5, 9\} = \{1, 2, 5, 7, 9\}$
- c) $\{3, 5, 9, 10\} \cap \emptyset = \emptyset$