## Lesson 6 Practice Problems

1. a. Find the lengths of the unlabeled sides.

b. One segment is $n$ units long and the other is $p$ units long. Find the value of $n$ and p. (Each small grid square is 1 square unit.)


2. Use the areas of the two identical squares to explain why $5^{2}+12^{2}=13^{2}$ without doing any calculations.

3. Find the exact value of each variable that represents a side length in a right triangle.

4. Write each expression as a single power of 10.
a. $10^{5} \cdot 10^{0}$
b. $\frac{10^{9}}{10^{0}}$
(From Unit 7, Lesson 4.)
5. Here is a scatter plot of weight vs. age for different Dobermans. The model, represented by $y=2.45 x+1.22$, is graphed with the scatter plot. Here, $x$ represents age in weeks, and $y$ represents weight in pounds.

a. What does the slope mean in this situation?
b. Based on this model, how heavy would you expect a newborn Doberman to be?
