Think about all the problems you solved for the pet-sitting business. Describe when you could solve the same kind of problem in a different situation in your life.

Teddy's Pet-Sitting Problem-Solving Journal

Taking Care of Teddy

Congratulations! You have just been hired for your first pet-sitting job! You have agreed to take care of Teddy the Toy Poodle for four days. You never imagined a 10-pound toy poodle would cause so many problems! You must solve every problem before Teddy's owners get back from vacation. However, Teddy's owners are very intense about Teddy's care. Each day they will text you to make sure you know what you are doing. They have also asked you to keep a journal for them to read when they get back. You must be able to answer their questions or they will find a new pet sitter!

Day One: Teddy Gets a Haircut

Today, Teddy has an appointment with the groomer to get his fur trimmed. Teddy's owners left $50 for you to pay the groomer. The cost of the grooming is $35.50. You have been instructed by the owners to leave a 15% tip on the cost of the grooming. You also want to buy a chew toy for $5.99. The tax rate in Teddy's state is 7.5%. Do you have enough money to get the chew toy? Write an equation to represent this situation. Then explain how the equation matches the story.

Day Two: Keeping Teddy Out of the Living Room

Every time you leave Teddy, he chews up something in the living room. Yesterday, it was a pillow in the living room. Today, he knocked over a picture frame. You notice a dog gate in a box and decide to put up a gate to block Teddy from getting into the living room. You need to make sure the gate is centered correctly in the middle of the doorway. The doorway is $34\frac{3}{4}$ inches wide. The gate is $22\frac{1}{2}$ inches. How long will the bars that attach to the gate need to be? Write an equation to represent this situation. Then explain how the equation matches the story.

Day Three: Teddy's Special Food

Teddy needs special food to stay healthy. You must mix his food in just the right way or Teddy will have terrible tummy troubles.

Directions: Get the 3-gallon container of DOGGY dry dog mix, which has 20% chicken, which is Teddy's favorite ingredient. Then, add the bag of PUPPY dry mix that has 30% chicken. You should now have a 10-gallon container mixed with DOGGY and PUPPY dry mix. Write an equation to describe the relationships between the different dog mixes. Then explain how the equation matches the story. What percent of the final dog food mixture is chicken?

Day Four: Teddy Goes to the Dog Park

You promised Teddy's owners you would take Teddy to the dog park, but you have been warned that Teddy cannot walk more than three miles or his little joints will ache. The owners want Teddy to walk as close to three miles as possible. When you get to the dog park, there are four paths.

- Path A: 0.24 mile
- Path B: $\frac{1}{2}$ mile
- Path C: 0.6 mile
- Path D: 500 yards

Select the paths or combination of paths that will allow you to walk Teddy as close to 3 miles as possible.

Write an equation to represent this situation. Then explain how the equation matches the story.