

Otter Problem Solving

Name _____

1. Because otters have very fast metabolisms, they eat around 20 percent of their body weight in food every day. To get enough to eat, they may spend up to 5 hours a day foraging for food. Otters always wash themselves after every meal. If an otter weighs 20 pounds, about how much food should the otter eat each day?

2. River otters are very playful. They like to swim and slide on rocks. A mother otter and pup will hold on to each other while sleeping to keep from drifting away from one another. Otters usually have 2-3 pups at one time. If there are 25 female mother otters with pups and each mother otter has 3 pups, how many mother and pup otters are there in all?

3. Otters sometimes carry tools such as rocks under their forearms. They use the rocks to crack open clam shells to feed themselves. A scientist observed an otter eating clams. The otter ate 20 clams in one hour. About how long did it take the otter to eat each clam?

4. Otters have a powerful, somewhat flattened tail perfect for propelling themselves through the water. They have webbing between their toes as well. They can close their nostrils and ears to keep out water, and have sensitive whiskers to feel out prey in murky water. Otters can stay underwater for up to 8 minutes. If an otter saw a predator and hid underwater for safety, how many times would the otter have to come up for air in one hour?

5. Fully grown otters can dive to a depth of up to 60 feet. How many yards is equal to 60 feet?

6. Otters have the densest fur of all animals! They have as many as 1 million hairs per square inch on the densest parts of their body. There are two layers of fur—an undercoat and then longer hairs that people can see. The layers trap air next to the otter's skin, which keeps the otters dry and warm and also helps with buoyancy. Otter pups have so much air trapped in there, they actually can't dive under water, even if they want to. They need dense hair because they are the only marine mammal that does not have a layer of blubber as insulation in the cold water. If an otter is approximately 3 feet long and 10 inches around, approximately how many total hairs would the otter have?

7. Otters can swim at speeds of 7 miles per hour and travel on land as fast as 18 miles per hour. How much faster is an otter on land than in water?

