



Maggie's Activity Pack!

Name _____

Date _____

Those Ramblin' Reindeer!

There are many people in the Arctic Circle regions of the world who depend on reindeer for their way of life. The Sami people of Scandinavia are one of these cultures. Travel with Maggie, Jenny, Kuma, and Yoshi as they visit the Sami and learn more about these people and the magnificent animals they herd.

Read more to learn about the Sami and their reindeer. Then solve the math problems.

A. Getting to Northern Finland

Maggie and Jenny are packing to meet Yoshi and Kuma in Helsinki, Finland. They know they must bring very warm clothes and good boots. Jenny, as usual, has taken charge and is telling Maggie exactly what she must pack in her duffle bag.

"Don't worry, Maggie. I've been on many ski trips. I know exactly what we need to bring. Just put in about 6 sweaters, several pair of long underwear, heavy pants, mittens, a good cap that covers your ears, and oh! Don't forget your sunscreen and sunglasses. You can get quite a glare as the sun reflects off the snow!" Jenny continued chattering on as Maggie smiled to herself.

"That Jenny," thought Maggie. "Shall I tell her or let her figure it out for herself? We'll be in the Arctic Circle in December. We won't see the sun!" Maggie smiled as Jenny tossed her sunglasses into her bag. She shook her head and decided to keep quiet. "She'll find out soon enough," whispered Maggie to Dude who had been sitting on the bed watching the frantic packing. The little dog almost seemed to wink at his owner.

Finally the two girls were ready. Maggie took out the passports and plane tickets for one last look before they headed to the airport. "Let's see," she mused. "We leave Washington Dulles at 6:15 PM. We arrive in Helsinki, Finland at 9:15 AM the next morning. Helsinki is 6 hours ahead of Washington. Hmm...I wonder how long the plane ride is? I always have trouble figuring those things out when there is a time difference. If Yoshi were here, he would be able to calculate it quickly!"

Yoshi would know that the plane ride will take _____ hours.

Once Maggie, Yoshi, Kuma, and Jenny arrive in Helsinki, they will need to get to the northern region of Finland. They have a choice. They can get on a plane and fly or they can spend the night in Helsinki and take a train.

As usual, Jenny has an opinion. "Maggie, I think we should just get on a plane and get right up there, don't you? I am anxious to see those reindeer. After all, if we take the train, we will have to pay for a hotel and meals, and it will be so expensive. It's really much cheaper in the

long run. Let's all take the plane." Jenny was still talking away as she led the others to the domestic plane terminal.

"Wait a minute, Jenny," said Yoshi. "We need to do the math. It may not be cheaper to fly." Jenny groaned. She knew she was in for a big math problem. All she wanted to do was see reindeer! But Yoshi was determined.

Kuma spoke up. "Yeah, Jenny. Let Yoshi figure it out. Then we can see if it is better to take a plane or train."

"Oh, let's just vote," demanded Jenny. "Who wants to fly? Raise your hand," said Jenny as she shot her arm into the air.

"Wait a minute, Jenny. I think we should figure out the least expensive way to travel. Then we can make a good decision. Do you agree Yoshi and Kuma?" The two boys nodded. "Okay," began Maggie.

"We will each have to pay \$152 for a one way plane ticket. A one way train ticket costs \$39."

"But don't forget," piped up Jenny. "We will each have to pay \$59 for a hotel room and then dinner will cost about \$12 each and breakfast will be about \$6 each."

Maggie did some quick figuring.

"Hmm... it will cost us _____ in total to take the train," said Maggie.

"And that is a _____ difference between the train and a plane," added Yoshi.

"So that means we should take the _____," said Kuma as he picked up his bag and walked out the door.

B. Oh...Tramping Through the Snow

"What time is Maggie?" screeched Jenny.

Maggie yawned, stretched and looked at her watch. "It's about 3:30," she mumbled.

"Wait a minute – 3:30 in the morning or 3:30 in the afternoon? It feels like it should be 3:30 in the afternoon, but it's not light outside."

Maggie smiled. Jenny would now discover for herself why this was called the land of the midnight sun – in summer. In the middle of winter, the land is bathed in darkness for almost 24 hours.

"Yikes, that's right!" yelled Jenny again. "We are in the north. The sun doesn't really rise in the winter here. How are we going to see reindeer?" Jenny moaned and leaned back into her seat.

"Don't worry, Jenny," laughed Kuma. "I've got this!" He pulled a light on a headband out of his backpack and jiggled it into place on his forehead. "See, this will light the way! And I've brought enough for all of us. See!" He pulled 3 more head lights out of the bag.

Yoshi laughed. "That's good because I've been studying this map. There are many great places to hike. We can strap on our snowshoes and these headlights and tramp through the snow. I figure we can go about 13 miles each day."

"Ohhh," groaned Jenny. "We're going to be here 8 days. You better have extra batteries for those things."

"That's right," said Yoshi. He did a quick calculation.

"We'll be walking a total of _____ miles!"

"I don't know, Yoshi. I think 13 miles is too much, especially in this cold. Let's try for half of that each day," said Maggie.

"That means we'll walk a total of _____ miles," said Kuma.

"I agree. That sounds more reasonable," said Jenny as she grabbed her bags and stepped off the train into the Arctic cold.

C. Take Only Pictures – Leave Only Snowshoe Prints

Kuma is very excited about the wonderful pictures he is sure to take in northern Finland. He is hoping to use some of these pictures to make a calendar for the new year. He is especially interested to get close up photos of a reindeer nose. This is one animal that has a built in nose-warmer. A reindeer nose is covered with fur! But Jenny has other ideas.

"Kuma, I think you should make sure to get your friends in the pictures this time," said Jenny. She swished her hair around and posed. "I was really irritated that you didn't get me in any of those pictures you took in Africa. That calendar you made would have been even better if you had a picture of me riding an elephant." She stomped her foot and continued. "The only picture you had of any of our group was Dude. And he doesn't really count because he's a dog!" Jenny crossed her arms and tapped her left foot. She glared at Kuma. "So," she continued, "Are you going to take any pictures of me?"

"Oh, I have plenty of film. Look at this." Kuma opened up his bag and showed Jenny 8 film rolls of 36 pictures each and 6 film rolls of 24 pictures each.

"That is a lot of film," nodded Jenny. "Let me check. How many photos can you take in all?"

Kuma can take _____ pictures.

Kuma then decides he wants to take 149 pictures of reindeer, 55 pictures of the Sami people, and 34 pictures of the Sami at work. If he does this, how many pictures will he have left to take of Jenny, Maggie, and Yoshi?

Kuma will have _____ pictures left to take of his friends.

D. Antlers or Horns?

Maggie was amazed when she came face to face with reindeer. "They're so big," she gasped. "And look at those horns! They branch out like a tree. I love the way the reindeer hold their heads so proudly. It almost seems they know their horns are special."

Kuma and Yoshi looked at each other and smiled. "Do you want to tell her?" asked Yoshi.

Kuma nodded. "Well, Maggie. Those aren't horns. They're antlers. Horns don't spread out. Antlers do. And there's one other difference. Antlers are shed each year. Horns are permanent."

Maggie nodded. "Makes sense to me, Kuma." She continued staring at the animals. "They're so big. I wonder how much they weigh."

"I just happen to have my trusty eBook that can tell us all about reindeer," said Yoshi. He opened his pack, pulled out the eBook, and clicked a few keys. "Here's your answer Maggie. Adult male reindeer weigh about 203.06 pounds in January. Adult females weigh about 187.88 pounds in January. I can even tell you how much they weigh at birth. Males weigh about 15.29

pounds when they are born and females weigh 14.61 pounds.” Yoshi looked up and smiled.
“Let’s see, how much weight do reindeer gain?”

Female reindeer gain _____ pounds.

Male reindeer gain _____pounds.

“Does that eBook give you any facts about how tall reindeer are?” asked Maggie.

“Absolutely,” answered Yoshi as he clicked away. “Here are more reindeer facts. Calves are about 28.5 inches at the shoulder when they are born. Males grow to a height of about 46 inches. Females grow to 38 inches.” He looked up and smiled. “Do you want me to tell you how much reindeer grow?” They all nodded. Yoshi bent over his book. “Okay, I’ve got it.”

Female reindeer grow _____ inches.

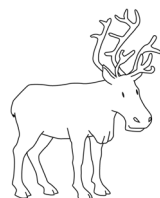
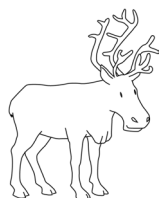
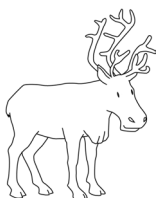
Male reindeer grow _____inches.

“Enough about facts and figures,” said Maggie. “Let’s get going. I want to hitch up a reindeer and ride in the snow.”

“Yes, let’s get going,” Yoshi agreed. “But not before I give you one more fact. Did you know that in one day a reindeer can pull a load of 300 pounds over 30 miles?”

Maggie laughed. “Then let’s have that reindeer pull us!”

Use the last reindeer fact to write your own problem!



Dear Colleague,

This activity gives your students a chance to see how math can be used in context. We hope they will enjoy the “give and take” between Maggie and her friends as they travel to the northern reaches of Finland to see reindeer in their natural setting. You may want to use this activity as a template and have your students write their own stories about a science or social studies topic and embed math problems into them.

Happy Holidays!

Answer Key:

A. Yoshi would know that the plane ride will take 9 hours.

“Hmm... it will cost us \$620 in total to take the train,” said Maggie.

“And that is a \$12 difference between the train and a plane,” added Yoshi.

So that means we should take the plane,” said Kuma as he picked up his bag and walked out the door.

B. We’ll be walking a total of 104 miles!”

“That means we’ll walk a total of 52 miles,” said Kuma.

C. Kuma can take 432 pictures.

Kuma will have 194 pictures left to take of his friends.

D. Female reindeer gain 173.27 pounds.

Male reindeer gain 187.77 pounds.

Female reindeer grow 9.5 inches.

Male reindeer grow 17.5 inches.

Note: All information is approximate and may have been rounded to provide appropriate math problems.

Goals:

Students will read a story about Maggie and her friends visiting the Arctic Circle to learn more about reindeer. Math problems are a part of the story. Intermediate students will solve multi-step addition, subtraction, and multiplication problems. Primary students solve simple addition and subtraction problems.