Take time with your family to talk and reason about math.

Bua joined the ski club this year and is eager to practice. There hasn't been much snow yet, but she was interested in comparing the predicted snowfall for several ski resorts near her for the upcoming weekend.

This chart shows the predicted snowfall for this weekend at each location near Bua.

City	Snowfall (inches)
Snow Hill	0.2
Skier's Landing	0.5
North Park	1.5
Ski Valley	1.8
Snowshoe Hills	0.4

1. What do you notice? What do you wonder?

2. Use pictures, models, or numbers to show how the predicted snowfall amounts for the ski resorts are related.

3. What mathematical questions can you ask about this situation? Answer all the questions you can!

Would you rather shovel...

One driveway by yourself?
8 feet wide and 30 feet long with snow 2 feet deep

or

Four driveways with 2 friends?
Each 15 feet wide and 25 feet long with snow 1 foot deep

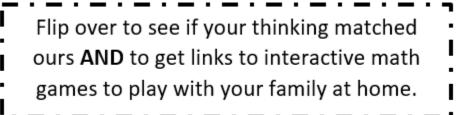Use pictures, models, words, numbers, or symbols to justify your choice.

I would rather shovel ... because ...

Challenge

If you were paid $15 for each driveway you shoveled, would that change your answer?

Follow-Up

Create your own problem like this one. Share it with someone and ask them to explain their choice.

Flip over to see if your thinking matched ours **AND** to get links to interactive math games to play with your family at home.

1. What do you notice? What do you wonder?

I notice:
- There is more snow predicted at some places than others.
- Some places have less than 1 inch and some have more than one inch.
- I see decimals with values in the tenths places.

I wonder:
- How did they calculate the predicted snowfall?
- Does it snow more later in the season?
- Does Ski Valley always get more snow than Snow Hill?
- What is the difference between the greatest snowfall and the least snowfall?

Interactive Math Games

Use Conversion of Capacity to Fill in the Correct Value

https://www.splashlearn.com/s/math-games/use-conversion-of-capacity-to-fill-in-the-correct-value

Find Volume using the Formula

https://www.splashlearn.com/s/math-games/find-volume-using-the-formula

One Driveway

(8 feet wide, 30 feet long, snow is 2 feet deep)

I thought of the snow in 2 layers, each 1 foot deep.

Each layer is 8 feet wide and 30 feet long, so the first layer is:

8 feet × 30 feet × 1 foot = 240 cubic feet.

One more layer on top of that =

480 cubic feet of snow

Four Driveways

(Each 15 feet wide, 25 feet long, snow is 1 foot deep)

Each driveway will have the same amount of snow.

15 feet × 25 feet × 1 foot = 375 cubic feet

Each of the kids shoveling will shovel a total of 1 whole driveway, and then ⅓ of another driveway.

⅓ of 375 cubic feet = (⅓ of 300) + (⅓ of 75)
= 100 + 25
= 125 cubic feet

So the total amount each kid will shovel is:

375 cubic feet (one driveway) + 125 cubic feet (⅓ of a driveway) =

500 cubic feet of snow

I would rather shovel … because …

Students might say:
I would rather shovel the one driveway. I would have less snow to shovel (480 cubic feet vs. 500 cubic feet) and it would take less time to shovel the snow. With the extra time, I could get together with my friends and do something more fun than shoveling snow.

Or they might say:
I would rather shovel four driveways with my friends. The amount of snow I'd have to shovel is only a little bit more than shoveling one driveway by myself, and I'd get to hang out with my friends. Plus, we'd be helping each other and helping our neighbors whose driveways we'd be shoveling, and I like to help people out.

Challenge
If you were paid $15 for each driveway you shoveled, would that change your answer?

If we got paid, I would rather shovel 4 driveways. Fifteen dollars times 4 driveways is a total of $60. If my friends and I shared that, we'd each get $20, as opposed to $15 for the one driveway. I'm trying to save money, and this would help.