

Order of Operations

Humza works for a large zoo. She is in charge of making sure the zoo always has enough food for the animals.

Every two weeks, Humza needs to order 780 pounds of frozen fruit.

This morning she was getting ready to place the order when one of the zookeepers told her that because of a temporary diet change for monkeys, they still have 125 pounds of frozen fruit in the kitchen. But starting next week, the monkeys will be back to their regular diet.

If frozen fruit costs \$2.04 per pound, how much will the zoo spend to have 780 pounds of frozen fruit on hand for the next two weeks?

In order to find out how much the frozen fruit will cost, Humza needs to find the answer to 2.04 times (780-125).

Notice that this expression has two kinds of numbers – decimal numbers and whole numbers. To simplify it, you will need to remember the processes for operating on each of these kinds of numbers.

This expression also has two operations – multiplication and subtraction.

Which operation should Humza complete first; the multiplication or the subtraction?

And what do the parentheses around the subtraction operation mean?

In this lesson, you will find answers to these questions using the order of operations.

The order of operations formalizes the order in which we complete addition, subtraction, multiplication, and division operations.

It is important for everyone to use the same order when completing operations so that we all arrive at the same answer.

This lesson will also address the simplification of exponential expressions such as 4 to the second power or 4 to the power of 2.

Once you have learned about these concepts, you will be able to help Humza determine the cost of the zoo's next frozen fruit order.