Name: *Completed Version*

Hour:_____

2.1 Equal Shares Introducing Unit Rates
Notes Packet

The ratio statements in Investigation 1 were written as "for every" or "to" statements. We also used the ":" notation.

Example: Suppose the cost for ten students to go on a field trip is $120. You can write ratios to show how the quantities are related.

1. 10 students for every $120

2. 10 student to every $120

3. 10 students : $120

Ratio statements can also be written as "per" statements.

Example:

It costs $120 per 10 students to go on the trip.

An equivalent comparison statement is:

"The cost per student to go on a field trip is $12"

1. $12 for every 1 student

2. $12 for each student

3. $12 per student

This particular comparison, cost per one student, is called a Unit Rate.

A Unit Rate is:

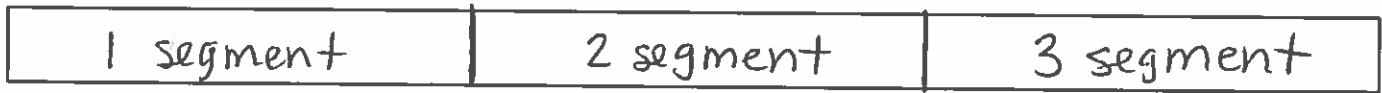- A comparison in which one of the numbers being compared is 1 unit.

Problem #1:

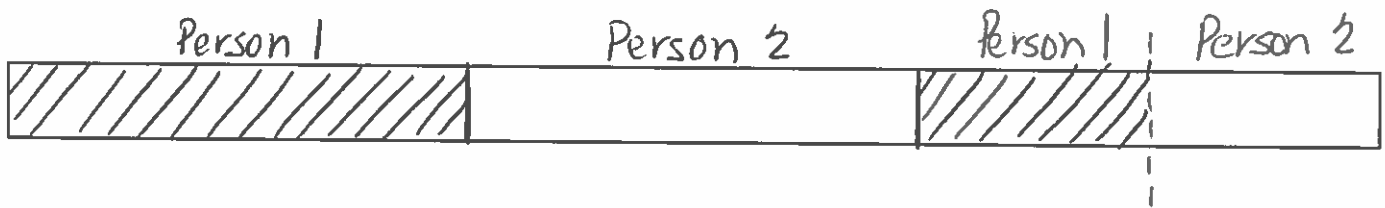If the cost of food is $250 for 50 students, what is the cost per student?

Answer with work:

An Example:

We are going to see how we can share a 3 segment chewy fruit worm between two people.
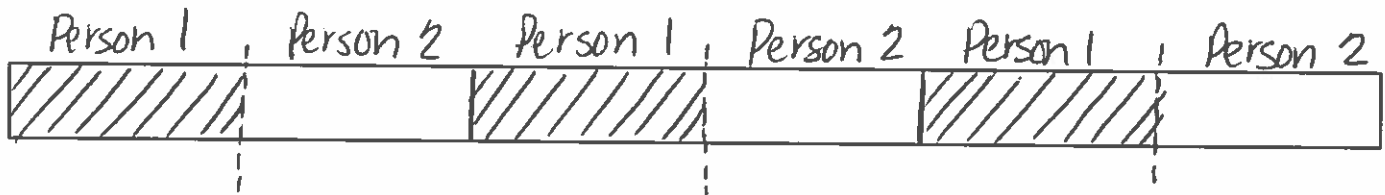
Here is our 3 segment worm:

| 1 segment | 2 segment | 3 segment |

First of all, I am going to divide the worm like this:

Person 1   Person 2   Person 1   Person 2

In this example, each person got 1 ½ segments per person.

Now, I am going to divide the worm like this:

Person 1 , Person 2   Person 1 , Person 2   Person 1 , Person 2

In this example, each person got 3 half-segments or 3/2 segments for one person.

Take note: This does not mean that each student got 3/2 of the worm, it means they got 3/2 of a segment of the worm.

Comparisons in which one of the numbers being compared is 1 unit is called a Unit Rate.

Examples:

1 ½ segments of the chewy worm per 1 student.

The previous example is a Unit Rate because there is 1 student receiving the 1 ½ segments.

More examples:

The cost for students to attend a field trip is $12.

Write this as a "For every" statement:

- The cost of the field trip is $12 for every 1 student.

Write this as a "per" statement

- $12 per student

What is the Unit Rate in the Above examples?

- Cost: $12 per 1 student.

Often we share food so that each person gets the same amount. This may mean that food is cut into smaller pieces. Think about how to share a chewy fruit worm that is already marked in equal sized pieces.

The chewy fruit worm below shows four equal segments:

1 segment	2 segment	3 segment	4 segment

Problem #2:

How can you share this 4-segment chewy fruit worm equally among four people?

How many segments of the worm does each person get?

Problem #3:

How can you share this 4-segment chewy fruit worm equally among three people?

How many segments of the worm does each person get?

Problem #4: Show two ways that four people can share a 6-segment chewy fruit worm. In each case, how many segments does each person get?

Problem #5: Show two ways that six people can share an 8-segment chewy fruit worm. In each case, how many segments does each person get?

Problem #6: Show how 12 people can share an 8-segment chewy fruit worm. How many segments are there for every person?

Problem #7: Show how 5 people can share a 3-segment chewy fruit worm. How many segments are there for every person?