

4.1 Cafeteria Actions and Reactions



4.1 Cafeteria Actions/Reactions

Elvira, the cafeteria manager, has just received a shipment of new trays with the school logo prominently displayed in the middle of the tray. After unloading 4 boxes of trays in the pizza line, she realizes that students are arriving for lunch and she will have to wait until lunch is over before unloading the remaining boxes. The new trays are very popular and in just a couple minutes 24 students have passed through the pizza line and are showing off the school logo on the trays. At this time, Elvira decides to divide the remaining trays in the pizza line into 3 equal groups so she can also place some in the salad line and sandwich line, hoping to attract students to the other lines. After doing so, she realizes that each of the three serving lines has only 12 of the new trays.

"That's not many trays for each line. I wonder how many trays there were in each of the cartons I unloaded?"

4.1 Cafeteria Actions/Reactions

Elvira, the cafeteria manager, has just received a shipment of new trays with the school logo prominently displayed in the middle of the tray. After unloading 4 boxes of trays in the pizza line, she realizes that students are arriving for lunch and she will have to wait until lunch is over before unloading the remaining boxes. The new trays are very popular and in just a couple minutes 24 students have passed through the pizza line and are showing off the school logo on the trays. At this time, Elvira decides to divide the remaining trays in the pizza line into 3 equal groups so she can also place some in the salad line and sandwich line, hoping to attract students to the other lines. After doing so, she realizes that each of the three serving lines has only 12 of the new trays.

36 ÷ 24 = 60 15 Box

"That's not many trays for each line. I wonder how many trays there were in each of the cartons I unloaded?"

Some students are sitting at the front table.

Four more students have just taken seats with the students at the front table.

Each of the students at the front table has been joined by a friend, doubling the number of students at the table.

The students at the front table separated into three equal-sized groups and then two groups left, leaving only one-third of the students at the table.

As the lunch period ends, there are still 12 students seated at the front table

Post-Its

reveal

$$\frac{2}{1} \cdot \frac{2(S+4)}{3} = 12 \cdot 3$$

$$\frac{2(S+4)}{3} = \frac{36}{2}$$

$$S+4 = 18$$
$$\frac{-4}{-4} \quad -4$$

$$S = 14$$

Post-Its

Some students are sitting at the front table.

Four more students have just taken seats with the students at the front table.

The students at the front table separated into three equal-sized groups and then two groups left, leaving only one-third of the students at the table.

Each of the students at the front table has been joined by a friend, doubling the number of students at the table.

As the lunch period ends, there are still 12 students seated at the front table

reveal

Some students are sitting at the front table.

The students at the front table separated into three equal-sized groups and then two groups left, leaving only one-third of the students at the table.

Each of the students at the front table has been joined by a friend, doubling the number of students at the table.

Four more students have just taken seats with the students at the front table.

As the lunch period ends, there are still 12 students seated at the front table

Post-Its

reveal

Post-Its

Some students are sitting at the front table.

Each of the students at the front table has been joined by a friend, doubling the number of students at the table.

The students at the front table separated into three equal-sized groups and then two groups left, leaving only one-third of the students at the table.

Four more students have just taken seats with the students at the front table.

As the lunch period ends, there are still 12 students seated at the front table

reveal

$$\frac{2(x+4)}{3} = 12$$

$$2\left(\frac{x}{3} + 4\right) = 12$$

$$\frac{2x+4}{3} = 12$$