

Mr. Tu's Excellent Examples

Module 1 Pizza Chef



Applying Lesson 1.1

1. A group having a party has ordered 10 pizzas for a Saturday night at Reno's Pizzeria. Reno's projects they will have 60 additional customers. They estimate selling one pizza for every three additional customers. Write and simplify an expression showing how many pizzas they expect to sell on Saturday night.

$$\begin{aligned}10 + 60 \div 3 \\10 + 20 \\30\end{aligned}$$

Reno's expects to sell 30 pizzas on Saturday night.

2. Forty-five people are attending a birthday party at Reno's Pizzeria on Friday night. on a typical Friday night, Reno's averages 12 customers every hour and is open for five hours. Estimating one pizza for every three customers write and simplify an expression representing the total number of pizzas Reno's expects to serve on Friday night.

$$\begin{aligned}45 \div 3 + 5 \times 12 \div 3 \\15 + 60 \div 3 \\15 + 20 \\35\end{aligned}$$

Reno's expects to sell 35 pizzas on Friday night.

Applying Lesson 1.2

1. Four people are hosting a large party at Reno's. The bill is \$156. Can the bill be divided evenly among each of the four people without using any coins?

Yes. Since 56 is divisible by 4, then 156 is divisible by 4.

2. If a fifth person wanted to help pay for the party in Problem 1, could the bill be divided evenly without using any coins?

No. Since 156 does not end in 0 or 5, it is not divisible by 5.

Applying Lesson 1.3

1. Reno's sold 42 pizzas on Monday and 36 pizzas on Tuesday. Write an expression showing how many pizzas they sold on Monday and Tuesday.

$$46 + 32$$

2. Reno's sold 36 pizzas on Wednesday and 42 pizzas on Thursday. Write an expression showing how many pizzas they sold on Wednesday and Thursday.

$$32 + 46$$

3. Write an equation showing that the expressions in Problems 1 and 2 are equal. What property does this equation demonstrate?

$$46 + 32 = 32 + 46$$

This equation demonstrates the Commutative Property of Addition.

Applying Lesson 1.4

1. Reno's is offering a special. If you buy one large pizza at the regular price, you receive a medium pizza for free. Each large pizza feeds three people and each medium pizza feeds two people. Write an expression using the Distributive Property of Multiplication over Addition showing how many people can be fed if a customer orders six large pizzas and receives six medium pizzas for free.

$$6(3 + 2)$$

2. How many people can be fed if a customer orders five large pizzas and receives five medium pizzas for free?

$$5(3 + 2) = (5 \times 3) + (5 \times 2) = 15 + 10 = 25$$

A total of 25 people can be fed with five large pizzas and five medium pizzas.

Applying Lesson 1.5

1. The manager of Reno's is reviewing his sales tickets for the last two hours. He wants to know about how many dollars of business the restaurant did during that time. Does he need an exact answer or an estimate?

Estimate

2. A customer makes a large order over the phone. They order five different items. They want to send their teen-age son to pick up the order, and they want to write a check. Reno's accepts checks only for the amount of purchase. Do they need an exact number or an estimate?

Exact

3. The manager of Reno's said that when estimating the ingredients he needs to order, it is better to have too much rather than not enough. Why would front-end estimation not be a good estimation strategy for determining an ingredients order?

Using front-end estimation gives the manager an estimate lower than the exact answer since all the numbers after the front-end digit are ignored.

