

Estimating Products

A bus service drives passengers between Milwaukee and Chicago every day. They travel from city to city a total of 8 times each day. The distance between the two cities is 89 mi. In the month of February, there are 28 days. The company's budget allows for 28,000 total miles for February. Is 28,000 mi a reasonable budget mileage amount?

One Way to Estimate

Estimate $28 \times 8 \times 89$.

You can round 89 to 100 and 8 to 10. Then multiply.

$$28 \times 10 \times 100 = 280 \times 100 = 28,000$$

Because this is an overestimate, there are enough miles.

Another Way to Estimate

Estimate $28 \times 8 \times 89$.

Adjust 28 to 30, 8 to 10, and 89 to 90.

$$(30 \times 10) \times 90 = 300 \times 90 = 27,000$$

Because all the numbers were adjusted higher, there are enough miles.

28,000 total miles is a reasonable budget amount.

Estimate each product.

1. $42 \times 5 \times 90$ _____

2. $27 \times 98 \times 4$ _____

3. $9 \times 55 \times 10$ _____

4. $22 \times 19 \times 100$ _____

5. **Number Sense** What are two different ways to estimate $9 \times 299 \times 10$?

Mrs. Carter ordered new supplies for Memorial Hospital.

6. About how much will it cost to purchase 48 electronic thermometers?

7. About how much will it cost to purchase 96 pillows?

Supplies	
Electronic thermometers	\$ 19 each
Pulse monitors	\$189 each
Pillows	\$ 17 each
Telephones	\$ 19 each