Understanding Word Problems, Part 1
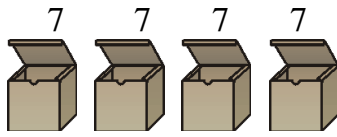
Example 1.	Example 2.
7 7 7 7	<image of three shirts> $8 $8 $8
There are seven rocks in each box. That is a total of $4 \times 7 = 28$ rocks.	Each shirt costs $8. All totaled, they cost $3 \times \$8 = \$24$.

Whenever repeated addition (adding the same number many times) would solve a problem, you can use multiplication.

In such problems, EACH thing or person has the same amount, or EACH thing costs the same, and so on. Watch for the word "each" — it often means you use multiplication.

1. Solve. Write a number sentence for each problem. Not every question uses multiplication, but several do. Write +, −, or × in the box. You can draw pictures to help.

a. Four children are playing tennis together. They each brought six balls. How many tennis balls do they have altogether? _____ ☐ _____ = _____	**b.** Amy owns 31 tennis balls. Today, she can only find 26 of them. How many are missing? _____ ☐ _____ = _____
c. A sandwich costs $9, and you have $24. How much do you have left if you buy it? _____ ☐ _____ = _____	**d.** A certain town has three post offices. Each post office has five workers. How many workers do the post offices have altogether? _____ ☐ _____ = _____
e. A sandwich costs $9 and a salad $7. What is the total if you buy both? _____ ☐ _____ = _____	**f.** Five children did 10 jumping jacks each. How many jumping jacks did they do in total? _____ ☐ _____ = _____

Example 3. What is the total cost?

We can do two separate multiplications and add the results.

Note that *both* multiplications are done *first*, and adding last.

$4 \times \$2$ + $3 \times \$5$

$\$8$ + $\$15$ = $\$23$

2. Write a number sentence for the total cost.

a.

$10 $10 $10 $20

____ × ____ + ____ = _____

b.

$3 $3 $4 $4 $4

____ × ____ + ____ × ____ = _____

c.

$13 $5 $5 $5 $5 $5

d.

$2 $2 $2 $4 $4 $4 $4 $4

e.

$3 $3 $3 $3 $2 $2 $2

3. Solve. Write down the calculations you do. Don't just write the answer.

a. Elijah bought five notebooks for $2 each
and a package of pencils for $5.
What was the total cost?

_____

_____

b. Mother bought four chairs for $10
each and two tables for $20 each.
What was the total bill?

_____

_____

4. Solve. Write down the calculations you do. Don't just write the answer.

a. Bill bought coffee for $2, a bottle of water
for $2, and four cheese sandwiches for
$3 each. What was the total bill?

_____

_____

b. If you added two more columns to this array,
what multiplication would it illustrate?

⬡ ⬡ ⬡ ⬡ ⬡
⬡ ⬡ ⬡ ⬡ ⬡
⬡ ⬡ ⬡ ⬡ ⬡

c. Mrs. Anderson has two plastic flower pots
and two ceramic ones. In each pot there
are five flowers. How many flowers does
she have in these pots?

_____

_____

d. Cynthia drew four rows of little hearts, with
four hearts in each row. Then she erased
four hearts from the middle of her array.
How many hearts does her drawing have
now?

e. The Jones family ordered three veggie
pizzas and one chicken pizza.
Each pizza was sliced into four pieces.
How many slices of pizza were there?

f. A large bottle of honey weighs 2 lb and
a small one weighs 1 lb. How much do
ten large bottles and two small ones weigh
together?

Puzzle Corner Which operations will make the number sentences true?

2 ☐ 4 ☐ 1 = 9   5 ☐ 5 ☐ 4 = 25   5 ☐ 2 ☐ 5 ☐ 5 = 20

Multiplication 1 (Blue Series)