

Still More Mental Math Strategies

Compatible numbers are numbers that can easily be combined.

Consider the problem

$$25 \times (18 \times 8)$$

The associative property of multiplication allows us to rewrite this problem as

$$(25 \times 8) \times 18$$

$$25 \times (18 \times 8) = (25 \times 8) \times 18$$

It's easier to multiply 25 by 8 than it is to multiply 18 by 8.

$$(25 \times 8) \times 18$$

$$200 \times 18$$

$$3,600$$

This strategy can also be used with addition.

Consider this addition problem:

$$45 + 86 + 55$$

Combining 45 and 55 first makes this problem easier.

$$(45 + 55) + 86$$

$$100 + 86 = 186$$

Now you try it.

Write 2 multiplication problems and 2 addition problems using the Compatible Numbers strategy.

Use words to explain how to apply the strategy to the problems.

It may be easier to work from left to right.

Consider the problem:

$$508 + 412$$

Begin on the left: $500 + 400 = 900$

Moving to the right: $8 + 12 = 20$

$$900 + 20 = 920$$

Solve this problem working from left to right: $726 + 458$

$$700 + 400 = 1100$$

$$20 + 50 = 70$$

$$6 + 8 = \underline{14}$$

1184

Now you try it.

Write 5 addition problems where you can apply the Work From Left to Right strategy.

Explain in words how to apply the strategy to each problem.