FOUR TIMES AS BIG

Four Times as Big

What's the point of this task?

Students at this level have not yet formally met multiplication, but they can certainly understand an explanation that four times as big as something means four of that something. So, for example, if they chose 8 as the smaller number, they could show four 8s as the sum and add or count to see that the sum must be about 32.

When students who have not yet learned multiplication use this task, they are practising adding and subtracting of 1-digit and 2-digit numbers, a topic certainly relevant to their level. But the phrase four times also serves to kick-start multiplicative thinking.

Some students may discover that the result of a sum about four times as big as the smaller number can only happen if the number they add is about three times as big as the smaller number. That's because one of something and three more of them makes four of them. In other words, they could come to an interesting generalisation about numbers while engaged in the practice of simple addition.

Questions to facilitate the learning

Other questions that might be asked include:

▌ Could the two numbers be the same size? Why or why not?

▌ What's the smallest sum you could get? The largest sum?

▌ Suppose the smaller number was less than 10, what's the biggest your second number might be?

▌ Could your answer end up being more than 100? How?

▌ What numbers might you use to make the addition really easy?

Curriculum connections

This activity relates to practising adding and subtracting numbers less than 100, but also sets the stage for thinking about multiplication.

Scaffolding the learning

▌ Suppose you make your small number 5. Could your big number be 20? Why or why not?

▌ Suppose your answer were 100. What might the small number be? How did you figure it out?

▌ Would you start with the big number or small number or answer first to solve this problem? Why?

Extending the learning

Students might look at a variety of combinations and see what they notice about how the larger number relates to the smaller one. For example, they might notice that when they look at 5 and 15 or 30 and 91 or 20 and 59, each time the larger number is about three of the smaller one.

Four Times as Big

You add two numbers. Each of the numbers is less than 100.

The sum is about four times as big as the smaller number.

What might the numbers be and what is the sum?