➤ Lori-Ann Muenzer of Edmonton participated in the 2004 Athens Olympic Games. She won Canada's first ever gold medal in cycling.

Lori-Ann was one of 11 090 athletes at the 2004 Athens Olympic Games. There were 10 651 athletes at the 2000 Sydney Olympic Games. About how many athletes attended both Olympic Games?

You know that an exact answer is not required because the question asks "about how many."
Estimate: 11 090 + 10 651

- One strategy is to use the front digits to estimate. This strategy is called **front-end rounding**.

  Add the first digits of the numbers:
  11 090 + **1**0 651 is about 10 000 + 10 000 = 20 000

  Then adjust the front-end estimate by looking
  at the first two digits in each number:
  11 090 + **10** 651 is about
  11 000 + 10 000 = 21 000
  Using the first two digits gets you
  closer to the exact answer.
  There were about 21 000 athletes
  at the two games.

  > Front-end rounding always gives an *underestimate*.

- Another strategy is to use
  compatible numbers to estimate.
  Compatible numbers are pairs of numbers
  that are easy to work with.
  For example, multiples of 10 are compatible numbers.
  To estimate, replace the actual numbers
  with numbers that are compatible:
  Write: 11 090 + 10 651
  as: 11 100 + 10 650 = 21 750
  There were about 21 750 athletes at the two games.

  > Compatible numbers may give an underestimate or an overestimate. It depends on the numbers you use.