50 First

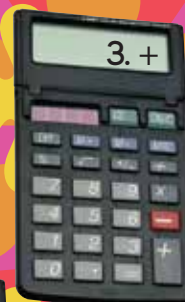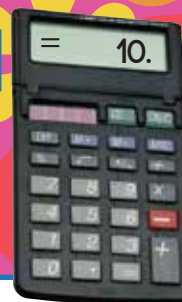**You need** ☑ a classmate   ☑ a calculator

Activity

Megan and Te Rama are playing a calculator game called 50 First.

Step 1: Megan enters a single-digit number onto a calculator. She can't use zero.

7.

Step 2: Te Rama adds another single-digit number. He can't use zero either.

3. +

He presses =.

= 10.

= 50.

Each player repeats step 2 until Te Rama gets exactly 50 on the calculator screen.

I'm the winner!

1. Play the game and then answer this question.

   a. Te Rama has a winning strategy.
   Discuss with a classmate what his strategy could be.

   b. How can Te Rama make sure he wins?

2. Suppose the game is 47 First instead of 50 First.
   The target total is then 47.
   What strategy could Te Rama use now?

3. Would Te Rama's strategy work if you played the game in reverse?
   That is, would his strategy work if you started at a target number and subtracted numbers to end at 0? Discuss this with your classmate.

4. The target total is now 300. This time, the players add on a number from 1 to 99 each time. Play the game with a classmate and work out a winning strategy.

Adding compatible numbers