Getting Even

• Objective •

Use some common properties of numbers.
Explore a variety of situations that lead to the expression of relationships.

• • • • • • • • • • • • • • • • Explanation of the activity • • • • • • • • • • • • • •

A game of chance to compare the relationship between odd and even numbers.
By working on this activity, students will reinforce their understanding of odd and even numbers. More able students could develop their skills in using algebra to prove generalizations.

• • • • • • • • • • • • • • • • • • Using the calculator • • • • • • • • • • • • • • • • • •
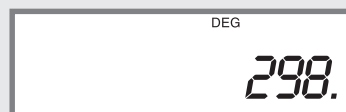
Calculator functions used: Addition

Press the following buttons and then start operation.

[ON/C] [MODE] [0]

A game for two players

The first player enters any number into his/her calculator without showing it to the other player.
For example, 298.

DEG
298.

The second player then enters a number into his/her calculator without showing it to the other player.
For example, 55.

DEG
55.

The players then show each other their numbers and add them. If the answer is even the first player scores 1 point; if the answer is odd, the second player scores 1 point.

[ON/C] 298 [+] 55 [=]

298+55= DEG
353.

The first player to score 10 points is the winner.

Getting Even

• • • • • • • • • • • Using the activity in the classroom • • • • • • • • • • •

The game is best played between pairs or small groups of students. It could be introduced by the teacher playing the game against some students.

While playing the game, students should be encouraged to reflect on whether the game is fair, and also try and think about the reasons for their conjectures.

Odd + Even = Odd
Even + Odd = Odd
Odd + Odd = Even
Even + Even = Even

• • • • • • • • • • • • • Points for students to discuss • • • • • • • • • • • • •

More able students could try to formally prove their conjectures.

The idea can be extended by students thinking about the conditions for obtaining even or odd answers when three numbers are added, or four numbers, or...

Further Ideas

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