Transcript of video Addition of Odd and Even Numbers

http://topdrawer.aamt.edu.au/Reasoning/Big-ideas/Proof/Proof-the-foundation-of-mathematics

Narrator: This student has been working independently to justify the conjecture: if you add an odd number to another odd number, you will get an even number. Her teacher asks her to share with the class how she would show that this conjecture is always true.

Student: Well, every odd number always has one number too many…only one, that, because so it's not an even number, because then … when it divides into pairs like … like three it's an extra one and like six all the pairs … the pairs are equal. There is two in each pair and that's … and but the odd numbers always have one too many. You could add more … as many pairs as you want, but you … you still have the one extra and so it works with every number, but with the evens you always are adding another pair, but if … if odd with another odd that these two would go together, now these and these are pairs.

Teacher: So the extras would make a pair?

Student: Yes. That works with every odd number.

Teacher: It works with every odd number.

Student: Because evens are made of pairs and odds are made of pairs with one extra…