



Algorithms For Perfect Squares

Work Sheet: 08-ALG-05-WS



- I. **Algorithm to check if a number is a Perfect Square:** Write the steps from the algorithm for determining if the number 289 is a perfect square.

Hint: Follow the steps from example in Slide 6.

Algorithm:



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- II. We saw that any Perfect Square can be written as a sum of consecutive odd numbers starting from 1. Write an algorithm using the above information, to determine whether a given number X is a Perfect Square.

Hint: Start adding odd numbers 1, 3, 5, 7, 9... and so on. Compare with X at each step.

Algorithm:



III. Determine if the below numbers are Perfect Squares, only by examining the digits. You can choose: YES, NO or MAYBE.

- a. 112376545**
- b. 100000000**
- c. 987654325**
- d. 765346787**
- e. 123467819**