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ITM 352

Algorithms Quiz

**Use as few coins as possible to make # cents**

Start with # cents.

**Check Quarters**

Compute # divided by 25. If it returns 1 or greater continue to Modulo Quarters computation. If not move to Check Dimes. **Quotient given is number of quarters needed.**

True.

**Modulo Quarters**

Passed previous if statement. Compute # modulo 25 to find the remainder. This remainder will be r.

False. Pass starting # to Check Dimes.

**Check Dimes**

Compute the inputted value divided by 10. If it returns 1 or greater continue to Modulo Dimes computation. If not continue to Check Nickels.

Pass remainder r to Check Dimes.

False. Pass starting # to Check Nickels.

True.

**Modulo Dimes**

Passed previous if statement. Compute input from Check Dimes # modulo 10 to find remainder. This remainder will be r.

Pass remainder r to Check Pennies.

**Modulo Nickels**

Passed previous if statement. Compute input from Check Nickles # modulo 5 to find remainder. This remainder will be r.

Pass remainder r to Check Nickels.

True.

False. Pass starting # to Check Pennies.

Display Answer

Show the number of each coin used.

**Check Pennies**

Compute # divided by 1. The quotient will be the amount of pennies used.

**Check Nickels**

Compute # divided by 5. If it is 1 or greater continue. If not go to Check Pennies.