

Fifties and Twenties for the Trip

Mark is taking a trip and is taking along exactly \$1020 in cash. His father gives him cash for the trip in denominations of 20 dollar bills and 50 dollar bills only. How many denominations of each (\$20's and \$50's) are possible? Hint: You may want to explore the Euclidean Algorithm and/or Diophantine equations for working through this problem systematically.