

# Bank Robbery Investigation

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A SPECIAL NEWS REPORT has just interrupted your favorite show. Sue Simmons, the NBC news anchor, says:

**Sue:** We have interrupted your regularly scheduled program to alert you of a local robbery that just happened. The police need your help to solve it! The bank manager of the Chase Bank on 10<sup>th</sup> Street and 2<sup>nd</sup> Avenue is on the phone to explain. Mr. Bank Manager?

**Bank Mgr.:** Hi, Sue,... (panting)... sorry I'm out of breath. I can't believe that just happened! A guy came in the bank... he had a gun... and he said that he was robbing us! We stuffed the duffle bags that he passed to the clerks with \$5 bills and \$10 bills, and he left with \$1,000,000 in all!

**Sue:** One million dollars in \$5 bills and \$10 bills?!?! That must have been a lot of bills! *How could one man possibly carry all those bills?*

You sense that Sue is suspicious. *Is it possible for a grown man to carry \$1,000,000 in \$5 bills and \$10 bills?*

Use what you know about area, surface area, volume, and/or weight to prove whether it is possible for one man to carry \$1,000,000 made up of \$5 and \$10 bills.

## Getting Started

Here are some thought starters that may help you develop your argument. You do not have to include all of these, though. Any measurements should be in inches or pounds.

- Calculate the area of a bill
- Find the number of bills required to make \$1,000,000 out of \$5 and \$10 bills
- Determine the amount of space (volume) that the bills would take up
- Calculate the weight of the bills
- Determine the amount of space (volume) that is inside of duffle bags
- Think about the amount of weight that a grown man can carry
- Model stacks of bills using other objects such as reams of paper or books

## Project Requirements

- Cover page with title, name, team, date, and illustration
- Typed (except for the math work)
- A paragraph that restates the problem in your own words
- A paragraph explaining whether it is possible for a grown man to carry that much money in those types of bills
- Clearly organized math work that proves your argument
- A conclusion: Based on your argument, what should be the next steps in the investigation? Who should the police arrest and why?

**Knowing what you know about modeling so far, what can we do to move this investigation even more towards a full-fledged modeling investigation?**