

## CRIME SCENE INVESTIGATION

A crime has been committed by one of the ten suspects below.

You have been brought in as a police consultant.

You should analyse the evidence provided to eliminate  
nine of the suspects.

You will need to be ready to present your findings to the chief  
inspector in 50 minutes.

Good Luck!

### THE SUSPECTS:

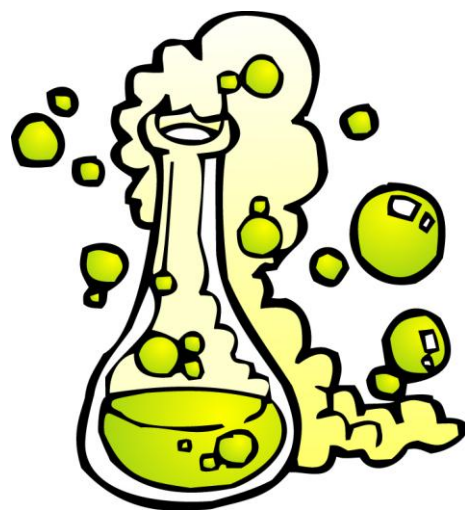


## **EVIDENCE 1: DEADLY POISON**

There was a poison found at the crime scene which was made up of Calculum, Numberon and Datatorion in the ratio of 2:3:5. It is only deadly in this ratio.

All of the suspects had all three compounds in their homes; eliminate the suspects who do not have deadly quantities.

Suspect	Calculum (g)	Numberon (g)	Datatorion (g)
1	4	6	10
2	1	1.5	5
3	1	1.5	2.5
4	8	12	20
5	14	21	35
6	16	24	45
7	20	30	50
8	12	18	30
9	18	27	45
10	6	9	15



## **EVIDENCE 2: MONEY IN THE BANK**

You know that the crime was motivated by money and so the police are interested in the finances of each of the suspects. You can eliminate the two suspects with the most money.

Suspect 1: Has £3,200 in his bank account

Suspect 2: Has 22% less than Suspect 9

Suspect 3: Has 10% less than Suspect 2

Suspect 4: Has 55% more than Suspect 10

Suspect 5: Has 5% less than Suspect 7

Suspect 6: Has 12% less than Suspect 4

Suspect 7: Has 20% more than Suspect 1

Suspect 8: Has the same as suspect 10

Suspect 9: Has 30% more than Suspect 6

Suspect 10: Has 30% less than Suspect 5



## **EVIDENCE 3: MARKED BILLS**

Some of the notes which the suspect stole were marked with a residue which the police use to track the money.

The police retrieved some money from each of the suspect's homes. Trace amounts of the residue were found on all of the bills. The results are shown below.

Eliminate the two suspects with the least amount of residue on their bills.

Suspect 1:  $0.002 + 0.004$

Suspect 2:  $0.007 + 0.093$

Suspect 3:  $0.09 + 0.03$

Suspect 4:  $0.12 - 0.1$

Suspect 5:  $1.2 - 0.8$

Suspect 6:  $0.003 + 0.1$

Suspect 7:  $0.32 - 0.31$

Suspect 8:  $0.9 + 0.2$

Suspect 9:  $0.49 + 0.01$

Suspect 10:  $0.12 + 0.3$



## **EVIDENCE 4: STRANGE FIBRES**

Some fibres were found at the scene and upon analysis were found to be mainly made up of cotton, polyester and angora. In addition it was found that:

cotton > polyester > angora.

The suspects clothes were analysed too and the results are below. You can eliminate any suspects who do not have the components in the correct proportions.

Suspect	1	2	3	4	5	6	7	8	9	10
Cotton	$\frac{1}{2}$	$\frac{7}{10}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{4}{5}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{1}{2}$	$\frac{1}{2}$
Polyester	$\frac{1}{4}$	$\frac{2}{5}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{7}$	$\frac{1}{4}$	$\frac{3}{7}$	$\frac{1}{4}$	$\frac{2}{5}$
Angora	$\frac{1}{6}$	$\frac{1}{4}$	$\frac{2}{7}$	$\frac{1}{6}$	$\frac{9}{10}$	$\frac{2}{15}$	$\frac{1}{10}$	$\frac{2}{9}$	$\frac{1}{9}$	$\frac{3}{11}$



## **EVIDENCE 5: TIME TO KILL**

The crime was committed at lunchtime. Each suspect needed a 36 minute window within this time slot to commit the crime. You are told the times they left work for lunch and the times they arrived back.

Suspect One left at 12.15pm, arrived back at 1.00pm

Suspect Two left at 12.15pm, arrived back at 12.30pm

Suspect Three left at 12.25, arrived back at 13.01

Suspect Four left at 12.05, arrived back at 13.00

Suspect Five left at 13.31, arrived back at 14.11

Suspect Six left at 13.06, arrived back at 14.01

Suspect Seven left at 14.00, arrived back at 15.02

Suspect Eight left at 12.03, arrived back at 12.34

Suspect Nine left at 13.09, arrived back at 13.41

Suspect Ten left at 13.04, arrived back at 13.31



