

Dursley Disaster

A Crime Busters practice test

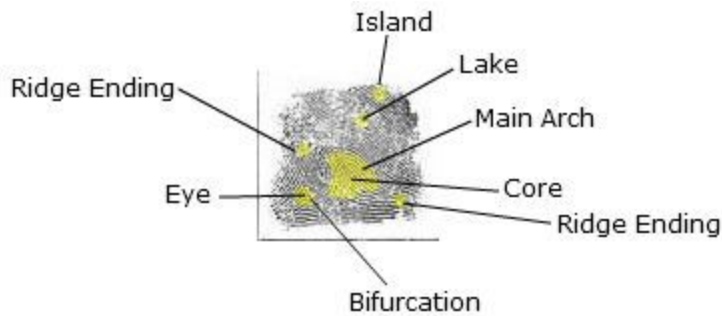
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ANSWER KEY

Fingerprints (15 points)

Fingerprint Analysis (2 pts each)

1. Arch
2. Dudley Dursley, R middle finger



3.

Example of possible answers

Questions (3 pts each)

1. Arch, loop, and whorl
2. Arch
3. C- friction ridges

Chromatography (5 points, 1 pt each)

1. 2
2. Dudley Dursley
3. Possible answers: Matching components/striations, similar results to the one shown from the crime scene, etc.
4. Yes.
5. 3

General Questions (5 points, 1 pt each)

1. C
2. B
3. C
4. A
5. B

Unknowns (50 points)

“What is it” column:

Crime Scene Unknowns (PX, PLX, LX, FX)- 2 pts each

Suspect Unknowns- 1 pt each

“How do you know” column: 1pt for each cell filled

Sample	What is it?	How do you know?
PX	Salt	Possible answers for this column include: Ph, chemical test results, shape, texture, etc.
P1	Vitamin C	
P2	Alka Seltzer	
P3	Salt	
P4	Sugar	
P5	Baking Soda	
P6	Calcium Carbonate	
PLX	PET	
PL1	PP	
PL2	PET	
PL3	HDPE	
PL4	PS	
LX	Water	
L1	Lemon Juice	
L2	Water	
L3	Rubbing Alcohol	
L4	Ammonia	
L5	Hydrogen Peroxide	
FX	Polyester	
F1	Cotton	
F2	Polyester	
F3	Wool	
F4	Rayon	

Analysis (25 points)

Correct suspect (Dudley Dursley)- 3pts

Plausible motive given- 2pts

- Dislikes diet, getting back at Mrs. Dursley
- Dislikes that Mrs. Dursley is spending extra time with the plant when he is home on holiday
- Other reasonable motive

Explains evidence connecting the crime to the suspect- 1pt each, max of 8

- His fingerprint
- His pen

- Sugar/salt mixture (PX) from his snack
 - Sugar (P4) collected from him
 - Salt (P3) collected from him
- Could have been drinking water (LX) while eating
 - Water (L2) collected from him
- His clothing could have torn on the bush while destroying it (FX)
 - Polyester fabric (F2) collected from him matches the fabric found at crime scene
- PET common household plastic, he could have been eating/drinking something from a container made of PET
 - PET (PL2) collected from him

Disproves other suspects- 2pts for each mentioned, 1pt for each piece of evidence up to 2

- Mr. Dursley
 - Was sick with cold which explains the powders found on him (Vitamin C and Alka Seltzer).
 - Was drinking a beverage when the crime occurred, could have been drinking lemon juice (L1).
 - Was wearing a cotton (F1) bathrobe.
 - Prescription bottles are commonly made from PP (PL1).
- Mrs. Polkiss
 - Was cleaning at the time of the crime. Baking Soda (P5), Rubbing Alcohol (L3), and Ammonia (L4) are common cleaning supplies.
 - HDPE (PL3) is commonly used for things such as bleaches, detergents, and other cleaners.
- Mrs. Green
 - Calcium Carbonate (P6) used in building materials, was building a bookshelf.
 - PS/Styrofoam (PL4) is used for things such as packing foam, the bookshelf materials could have been prepackaged in Styrofoam.
 - Hydrogen Peroxide (L5) is commonly used to clean cuts, Mrs. Green cut her foot.