



# Signature Verification Training



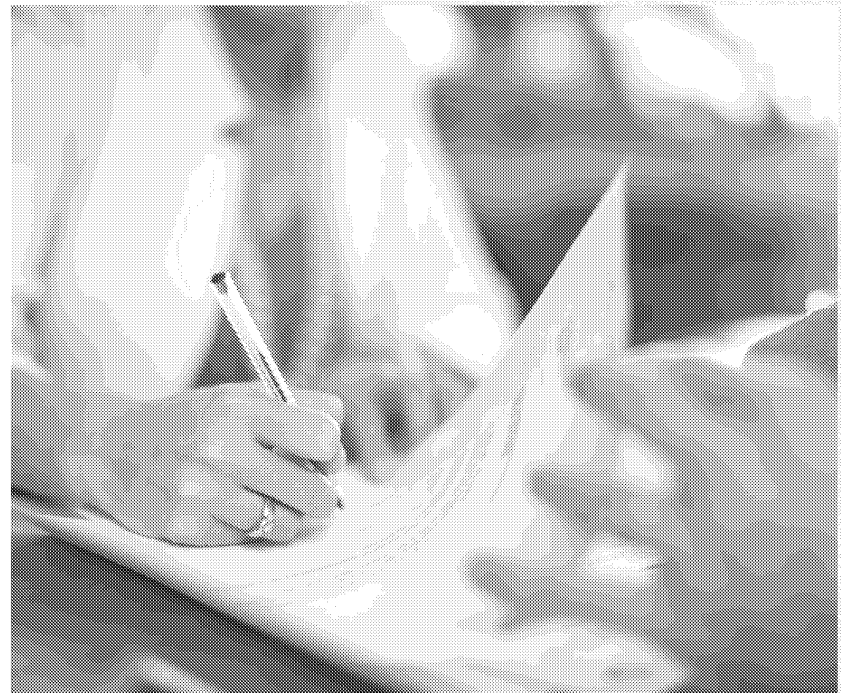
Bureau of Elections  
June 2023



MDOS0000814

# What is signature verification?

- Signature verification is the process of comparing the signature on a voter's absent voter ballot application or absent voter ballot envelope with the voter's signature in the Qualified Voter File (QVF) or on the voter's master card.



# **Where is signature verification used in Elections?**

## **Examples where signatures are verified:**

- Absent voter ballot applications
- Absent voter ballot return envelopes
- Petitions

**Is a  
person's  
signature  
part of  
their  
identity?**

**We sign our name so frequently that:**

- It's done without much thought
- It becomes habitual
- We do not think about each letter
- We just write!



## Optional exercises – grab a partner:



1. On a sheet of scratch paper, sign your name five times.
2. Look at each one of your signatures, noticing the similarities and differences.
3. Find a partner and exchange the signature sheets.
4. Using a pen, each person circles the similarities and underlines any differences in their partner's signatures.
5. Did your partner identify the same similarities and differences you noticed in Step 2 of the activity?



1. With the same partner, try signing each other's name with and without looking at the reference sheet.
2. Discuss the similarities and differences.
3. How well did these signatures match the five authentic signatures?

# **WHAT ARE THE SOURCES OF SIGNATURE IMAGES?**

- Digital images from the driver's license or state identification card
- Scanned images from absent voter ballot applications or voter registration forms
- Master card signatures
- Historical signatures – might look like an older signature on file (new signature might be missing all the hearts, swirls, and smiley faces)



# Electronic or E-pad Signatures

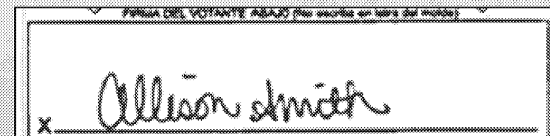
Voter Record Signature

A handwritten signature of Michael Green in a cursive script.

Mail Ballot Signature

A handwritten signature of Michael Green in a cursive script, similar to the one on the left.

**Signatures on e-pads might be missing parts of the image**

A handwritten signature of Allison Smith in a cursive script.A handwritten signature of Allison Smith on a ballot. The signature is written in a cursive script, but it is bolder and more pixelated than the reference image on the left. The ballot has a header that reads "FIRMA DEL VOTANTE ABAJO (Puede escribir en letra del modelo)" and a small 'x' mark next to the signature.

**Reference image might be pixelated and bolder or have thicker writing**





# **WHEN MIGHT A SIGNATURE HAVE VARIANCES?**

## **Variances in a person's signature can be caused by:**

- Evidence of trembling or shaking in a signature could be health-related or a result of aging
- The voter may have used a diminutive of their full legal name, including, but not limited to, the use of initials, or the arrangement of components of their full legal name, or omitting a second last name
- The voter's signature style may have changed slightly over time
- The signature may have been written in haste
- The surface of the location where the signature was made may have been rough, soft, uneven, or unstable

## Age/Other Factor Examples

Voter Record Signature

*Theodore Cuyon*

Mail Ballot Signature

*Theodore Cuyon*

## Name Presentation Examples

Voter Record Signature

*Isabella Jones*

Mail Ballot Signature

*Bella Jones*





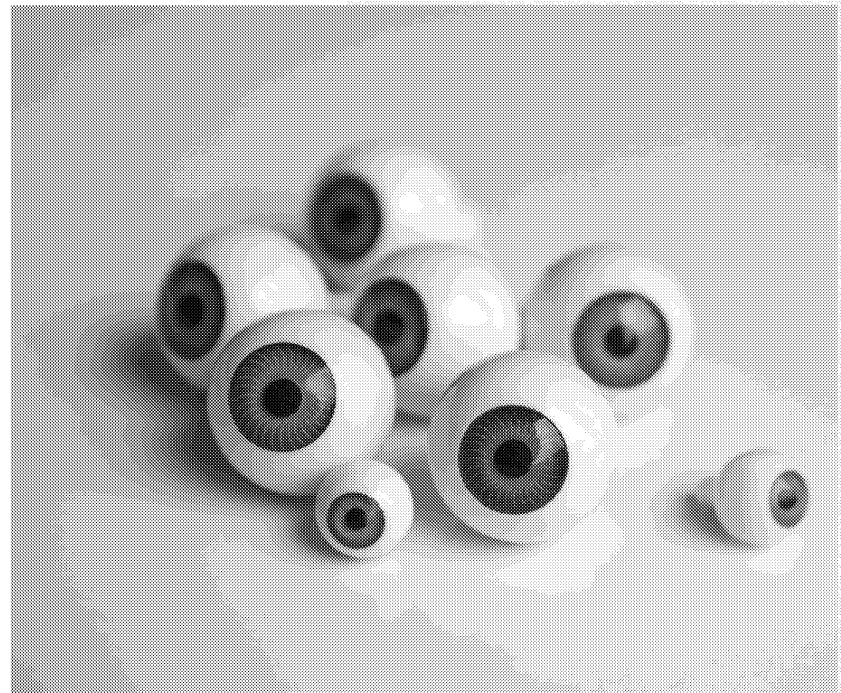
### Activity 3

1. Use the reference sheet with your five signatures.
2. Take a look at the signature on your driver's license or other government issued ID card.
3. How well does the ID signature (possibly from a stylus and signature pad) match the five pen and ink signatures?
4. Find a different partner and discuss the similarities and differences.

# More Eyes

## Best Practice:

- If in doubt, check it out!
- Pass along to another staff member for review.
- Be certain before you reject!



# VERIFICATION BASICS

## **Because variances are expected:**

- Look for redeeming qualities
- Identify the variances and the similarities
- When a signature doesn't sufficiently agree with the signature on file, the signature should be referred for additional review





# Initial Review

## **Most signatures will be accepted in this step**

- Signature being examined is compared with the reference signature on file
- Signatures that have obvious matches and sufficiently agree should be accepted
- Focus is on the similarities as well as the differences
- If differences outweigh similarities, refer for additional review



# Additional Review

## **Another set of eyes:**

- Review all available signatures in the voter's registration record and master card
- Does the signature sufficiently agree with the signature(s) on file?
- Reach a decision to accept or reject
- Office processes may include an additional layer of review due to volume or staff training





# Spot Check for Quality

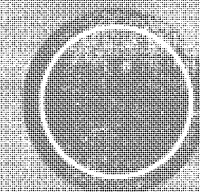
## Quality Control:

- Be observing and checking the signature reviewers
- Balance the number of signatures and workload with experience
- Track the verifiers' accept/reject rates





**Think of signatures  
like a picture**

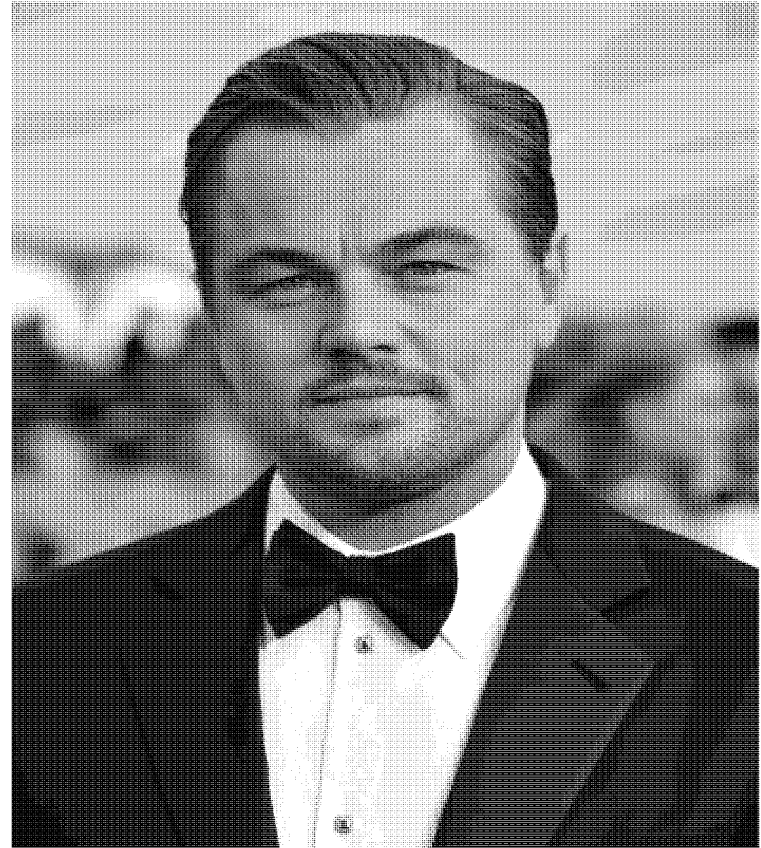


## What is the tolerance level?



### Activity 4

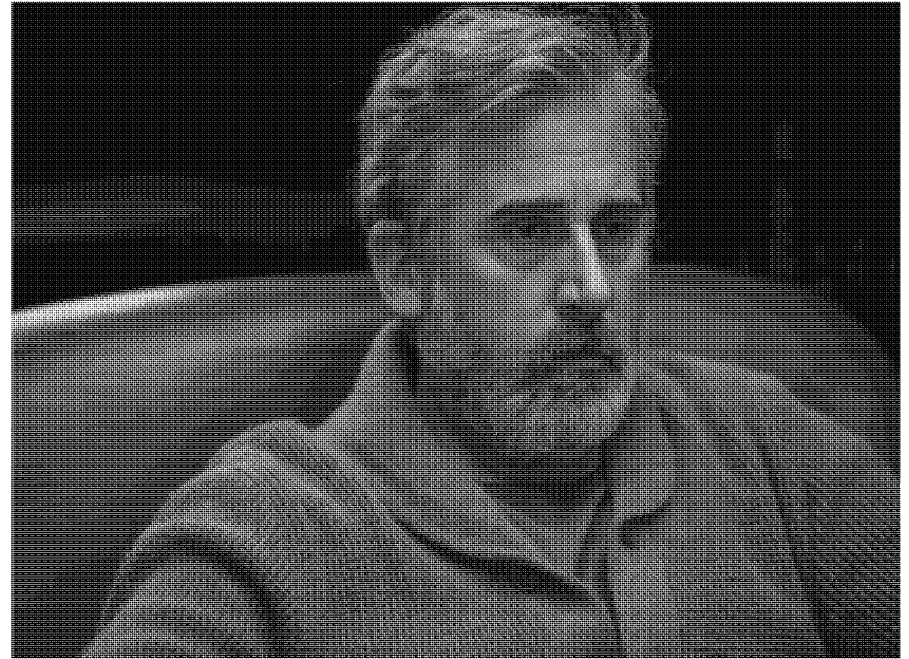
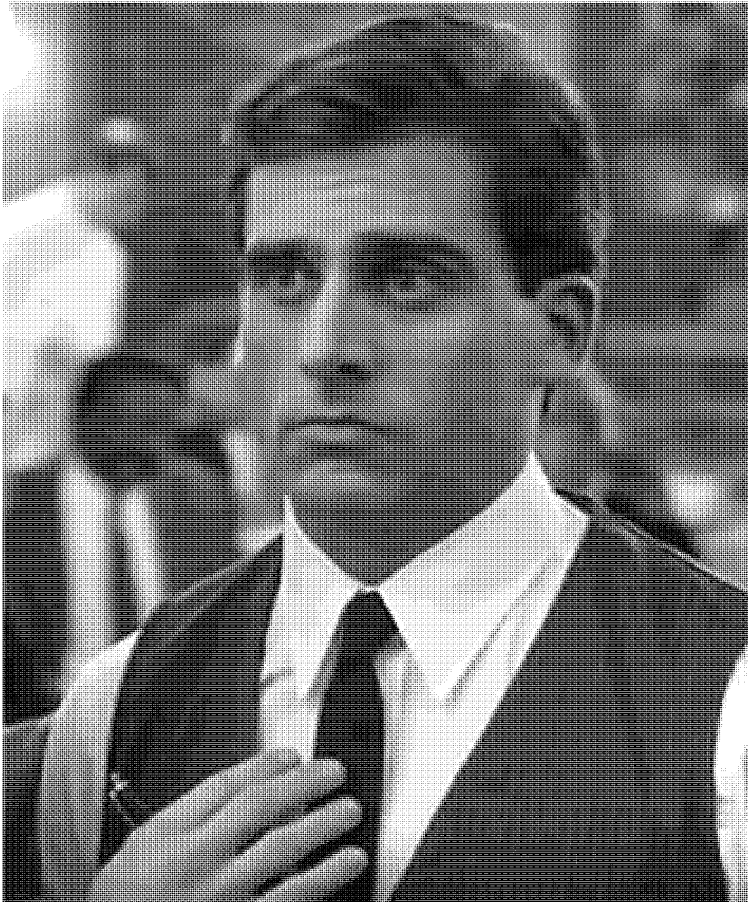
1. You will be shown a pair of pictures
2. There are differences between the pictures, but your job here is to determine whether the pictures are of the same person



- Notice the similarities and differences. The nose and ears are similar.
- Remember your role as an Initial Review reviewer is triage - is this one questionable enough to send to Additional Review reviewer?







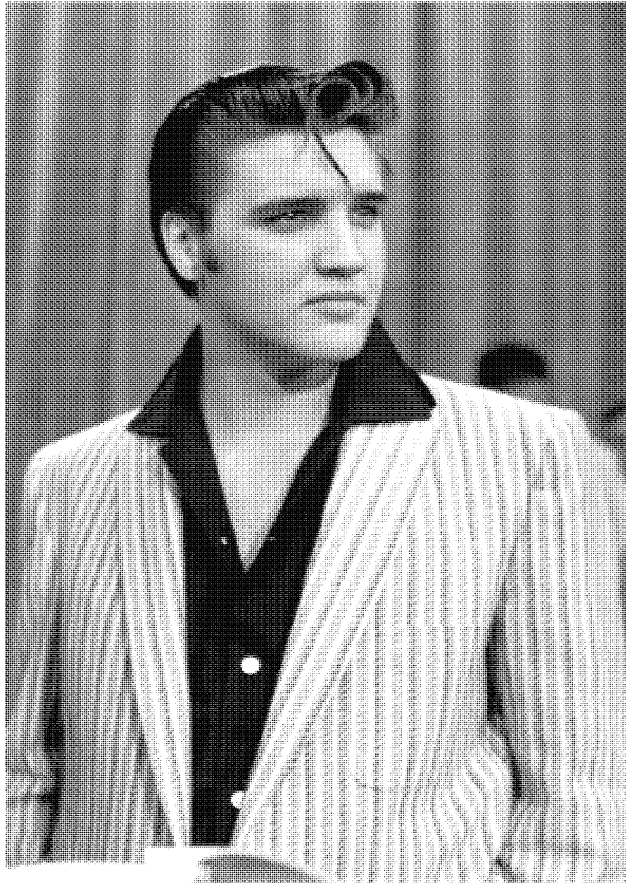
- Notice the similarities and the differences. The eyes and cheekbones appear to be similar.
- Taken altogether, are these differences significant enough to refer this to a second level of review, or are they similar enough as a whole, that this should be accepted?





- Remember that the goal of Initial Review is to accept the signatures that sufficiently agree with the voter's signature on file. A tolerance level that is set too high may result in improper "false negatives" or rejections.
- Is the one on the right a poor copy? Different ears, face, eyes, nose, bowtie, pants, altogether a bit shabby looking

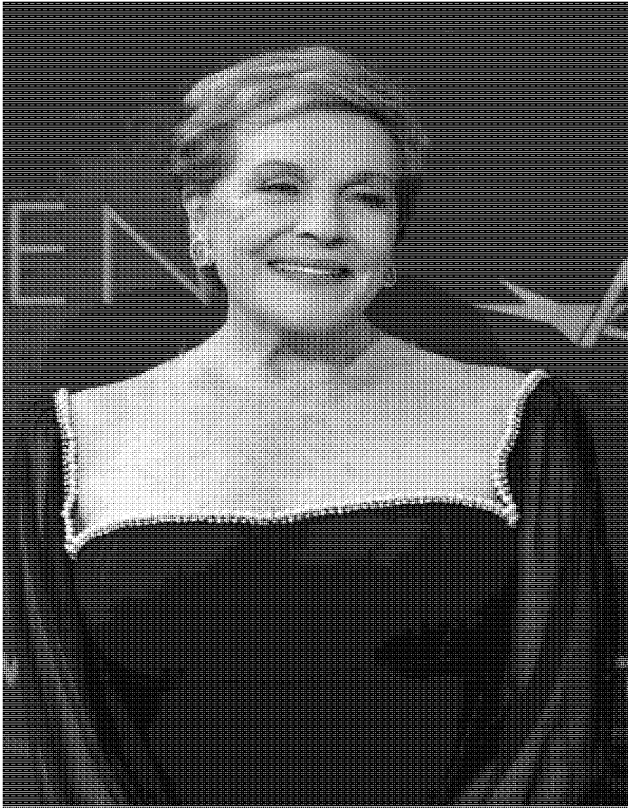




- Is this one where you would quickly identify that it should be rejected?
- Where would you place the matching percentage on this one? 10%?
- What about Elvis in his later years? Is this an imposter?

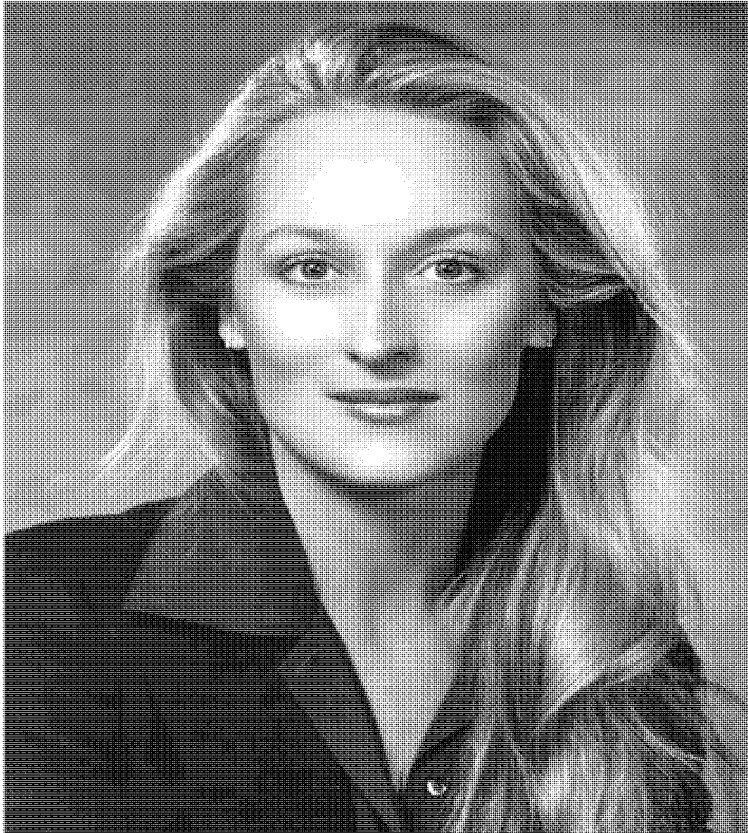






- After you look at all these different details, does this one lean towards an Additional Review, or does it still meet a matching threshold?
- Think about the similarities here - her posture, nose, and lips.





- Younger vs. Older
- Think about the similarities here - her hairline and eye color.





- Younger vs. Older.
- Are there any characteristics that match?





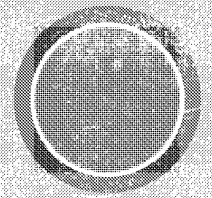
- You can tell it's trying to match, but is an obvious recreation







# **Getting into the Details**

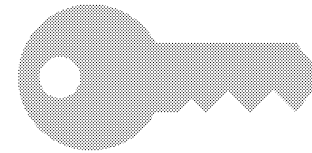


# HOW DO WE COMPARE SIGNATURES?

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**Learn what to look for and then  
trust your best judgment**



## **Two key steps:**

1. Quick analysis of the general character of the signature
2. Sharp focus on the individual details





## Broad Characteristics

**Look at the signature like a picture and notice the broad characteristics. If the broad characteristics are clearly consistent with the signature on file, accept and move on. If not, go to Step Two.**

- Spelling
- Type of writing (cursive or print)
- Proportions
- Spacing
- Flow
- Slant





# Spelling

Voter Record Signature

John Kennedy

Mail Ballot Signature

John Kenedy<sup>SP</sup>

- This is a not always a straightforward issue. If the name is misspelled, you should refer the signature for review.
- This could be a scrivener or data entry error on voter record.

# Types of writing

Voter Record Signature

*Thomas Jefferson*

Mail Ballot Signature

Thomas Jefferson

- The type of writing is an easy characteristic to notice.
- Be aware that some individuals use a mix of cursive and printing.
- Your focus should be on the consistency with the signature on file.

# Printed Signatures

Voter Record Signature

Michael Peterson

Mail Ballot Signature

Michael Peterson

- Many voters that are younger in age do not use cursive to sign their names.
- There should still be characteristics in a person's printing that would show up in repeated signatures.

# Proportion

Voter Record Signature

Harry Truman

Mail Ballot Signature

Harry Truman

- Consistency in terms of overall size and proportion of the letters to each other.
- How much space the signature takes up in the given space.
- The relationship between the signature and the signing line.

# Spacing

## Voter Record Signature

Franklin D Roosevelt

## Mail Ballot Signature

Franklin O D Roosevelt

- Look for spacing between individual letters and the parts of a signature (first, last, middle initial, etc.).

# Flow

Voter Record Signature

*Gerald Ford*

Mail Ballot Signature

*Gerald Ford*

- People sign their name thousands of times over their lifetime, usually very quickly and without hesitation.
- A forgery may show hesitation marks, such as choppy lettering, pen drags or lifts instead of a consistent flow.



# Slant

**Voter Record Signature**



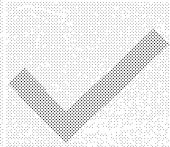
**Mail Ballot Signature**



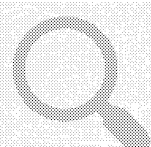
- The slant of a signature is one of the easiest characteristics to notice.



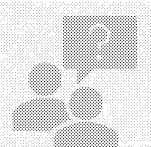
# Inconsistencies



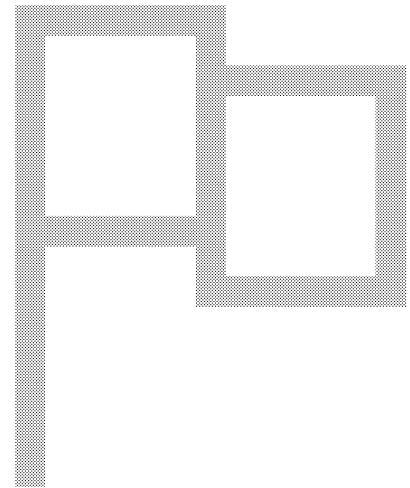
Signatures that have obvious matches and sufficiently agree should be accepted.



Focus is on the similarities as well as the differences.



If differences outweigh similarities, or inconsistencies are noted, refer for additional review.





1. Print your name on a sheet of paper and trade with someone else.
2. Sign the other person's name, using only their printed name as guidance.
3. Compare your version of the other person's signature with their five signatures from the earlier exercise. How do they compare on the broad characteristics:
  - Type of writing
  - Proportions
  - Spacing
  - Flow
  - Slant
  - Spelling



## Detailed Characteristics

**If there are some differences between the signature being verified and the signature on file, evaluate the detailed characteristics for similarities, redeeming qualities, and idiosyncrasies which include:**

- Internal spacing of letters within the names
- Size or proportions of a letter or letter combination
- Curves, loops, dots, dashes and cross-points
- Beginning and ending flourishes and strokes
- The presence or absence of pen lifts



# Internal Spacing

Voter Record Signature



Mail Ballot Signature



- There is a larger space between the capital A and the lowercase n in the mail ballot signature than in the signature on file.
- However, notice the beginning flourish of the A and the distinctive lowercase a at the end of the name.

# Proportion of Letters

Voter Record Signature

A handwritten signature of the name 'Steven' in a cursive script, appearing as it would in a voter record.

Mail Ballot Signature

A handwritten signature of the name 'Steven' enclosed in a rectangular box. The box has short horizontal lines extending from the left and right sides. A downward-pointing arrow is positioned to the left of the box, and an upward-pointing arrow is positioned to the right of the box, likely indicating the vertical extent of the signature.

- In this example, the V and E are much larger than the rest of the name in the mail ballot signature.
- However, there are several other characteristics that appear to match, such as the distinctive S.



## Other Distinguishing Features

**Voter Record Signature**

Harold Washington

**Mail Ballot Signature**

Harold Washington

- In this example, there are marked differences with the cross-bar of the capital H and the loops or lack thereof in the lowercase l and t.
- These discrepancies should trigger additional review.

# Beginning and Ending Strokes

Voter Record Signature

Harold Washington

Mail Ballot Signature

Harold Washington

- The signature on the right is lacking all of the beginning and ending flourishes on the capital letters and on the final n.
- These discrepancies should trigger additional review.

## Pen Lifts or Drags

Voter Record Signature

Cleveland

Mail Ballot Signature

Cleveland

- Here there are hesitation marks in the v and l.
- These could be indicative of the age or health of the signer and should trigger additional review, and voter might need to be contacted to provide an updated signature.

## Specific Letters

**K**

*Ken Ken Kenn Kies*

**E**

*Ed Ed Ed Ed*

**M**

*Mc Mc Mc Mc*

- Look back at your personal signature examples from the first activity. Are there letters that you make in a particular way every time you sign?
- The more complicated the letter or letter combinations (flourishes), the more you'll see differences if the signature is not genuine.
- Sometimes a signer has a very distinctive letter that they sign a particular way.
- Also, when the signer learned how to write influences what their handwriting looks like – old school cursive?



## Easy way to remember!

### A. C. E.

- **A - Analyze:**
  - Initially note the overall characteristics, distinct indicators, and general habits.
- **C - Compare:**
  - Contrast similarities and differences.
- **E - Evaluate:**
  - Assess the significance or insignificance of the similarities and differences.







**Don't be  
Shy!**

**Let's  
try!**



MDOS0000860

# Training Exercises

1. The next few slides will each feature a pair of signatures.
2. The first signature is the official signature from the voter registration record.
3. The second signature is the one being evaluated.
4. Write down whether you would accept or reject each signature.



A

SIGNATURE LINE

Allison Smith

FIRMA DEL VOTANTE ABAJO (No escribas en letra del molde)

x Allison Smith

**B**

Sam Taylor

x 



C

GLORIA D. J. CISNEROS

Gloria Cisneros 11.6.2012





# Exercise 1 - Answers

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**A. Accept**

---

**B. Reject**

---

**C. Reject**

# Training Exercises

1. In this exercise, you will be shown one example of a word written in someone's handwriting.
2. Choose the best match from four choices and write down your answer.



## 1. State

State

---

A. State

B. State

C. State

D. State



## 2. Precinct

precinct

A. Precinct

B. Precinct

C. precinct

D. precinct



### 3. Ballot

..... Ballot

A. Bellot

B. Ballot

C. Ballot

D. Ballot





## 4. Voter

Voter

.....

A. Voter

B. Voter

C. Voter

D. Voter



## 5. Elections

*Elections*

.....

A. *Ekctions*

B. *Elections*

C. *ElectionS*

D. *Electionz*



## 6. Results

Results

.....

A. Results

B. Results

C. Results

D. Results



# Exercise 2 - Answers

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1. State - D
2. Precinct - B
3. Ballot - B
4. Voter - D
5. Elections - C
6. Results - D

# Training Exercises

1. The next slide contains 30 words written by 15 authors.
2. Find the pairs that were authored by the same person and write down your answers.





- |          |          |          |          |
|----------|----------|----------|----------|
| 1 State  | 2 State  | 3 State  | 4 State  |
| 5 State  | 6 State  | 7 State  | 8 State  |
| 9 State  | 10 State | 11 State | 12 State |
| 13 State | 14 State | 15 State | 16 State |
| 17 State | 18 State | 19 State | 20 State |
| 21 State | 22 State | 23 State | 24 State |
| 25 State | 26 State | 27 State | 28 State |
| 29 State | 30 State |          |          |

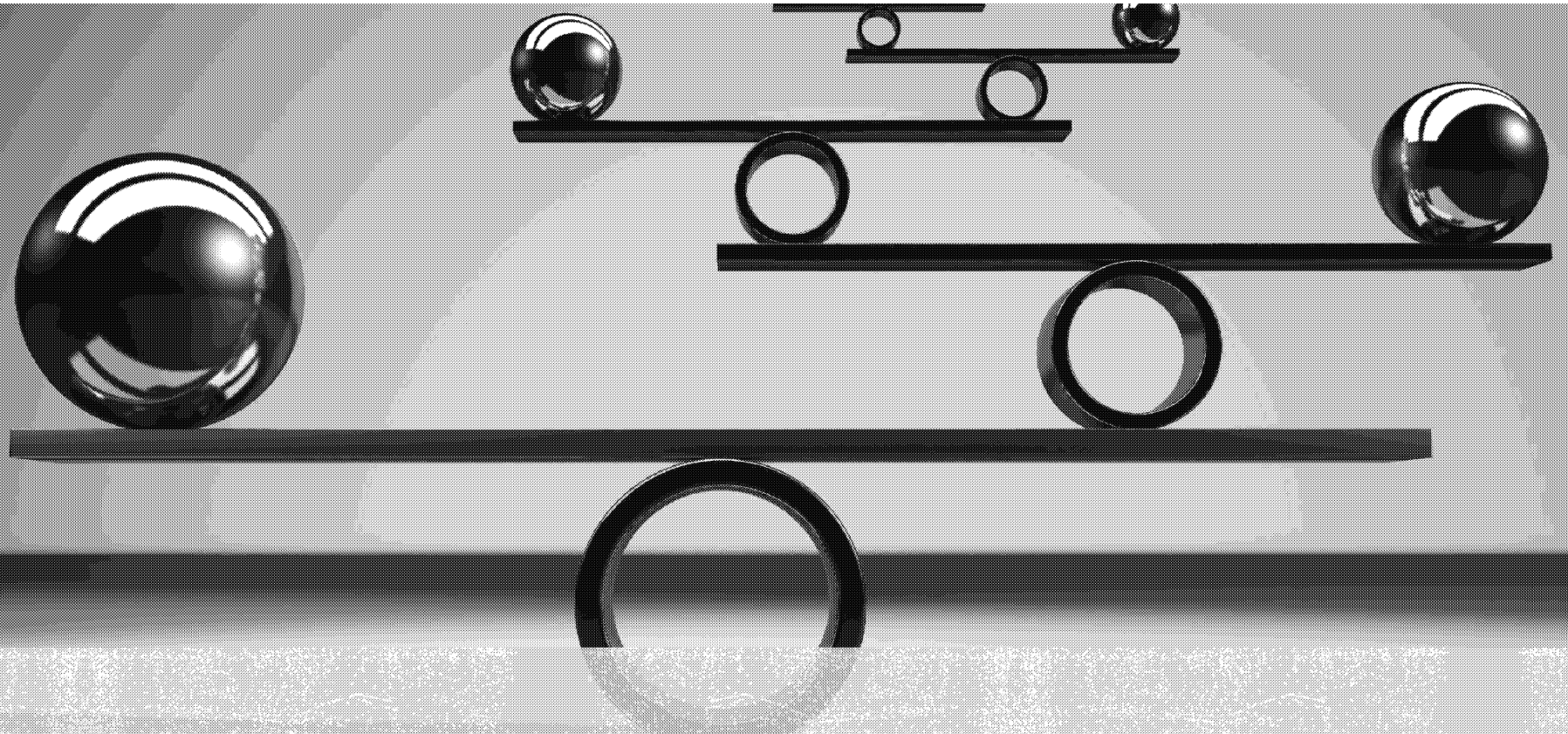
**Match the  
Handwriting**



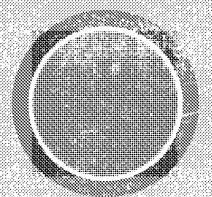
# Exercise 3 - Answers

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1 & 8	2 & 17	3 & 9
4 & 6	5 & 23	6 & 4
7 & 15	8 & 1	9 & 3
10 & 21	11 & 26	12 & 22
13 & 19	14 & 25	15 & 7
16 & 28	17 & 2	18 & 27
19 & 13	20 & 30	21 & 10
22 & 12	23 & 5	24 & 29
25 & 15	26 & 11	27 & 18
28 & 16	29 & 24	30 & 20



**Recap**



Were these written by the same person?

BALLOT SIGNATURE



VOTER FILE



Yes

No

**Correct!** These signatures were written by the same person. Age, injuries and disabilities that affect fine motor skills — including arthritis and multiple sclerosis — can lead to changes in handwriting like those seen here.

Source: Training material from Oregon Secretary of State Elections Division



Were these written by the same person?

BALLOT SIGNATURE



VOTER FILE



Yes

No

**Correct!** These signatures were written by two different people. In 30 states, voters are notified of a perceived mismatch and are given a chance to "cure" their ballot, in case officials made the wrong determination.

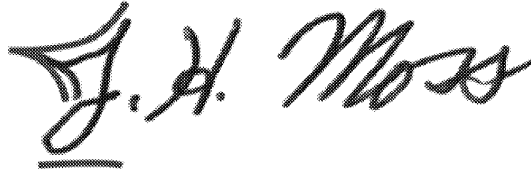
Source: Forensic document examiner Thomas Vastrick



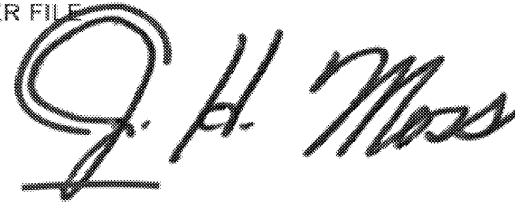
Were these written by the same person?

Video

BALLOT SIGNATURE

A handwritten signature in cursive script, reading "J. H. Moss". The signature is written in dark ink on a light background. The "J" is large and loops around the "H". The "Moss" is written in a fluid, cursive style.

VOTER FILE

A handwritten signature in cursive script, reading "J. H. Moss". This signature is very similar to the one in the ballot box, showing the same fluid cursive style and structure.

Yes

No

**Correct!** These signatures were written by the same person. Handwriting often evolves with age, and many years may have elapsed between a signature on a voter registration form and a signature on a ballot.

Source: Forensic document examiner Thomas Vastrick