# **Data Validation for FY23 Governmentwide Annual Assessment**

The General Services Administration (GSA) developed an R[[1]](#footnote-1) script, detailed below, to systematically validate response data by criteria. Most of the data validation tests function as conditional if-then logic and rely on interconnections between different responses. Taken together, the script created a dynamic and responsive validation process, highlighting potential inconsistencies. When the validation tests detected inconsistencies across a given reporting entity’s data submission, a flag was triggered. **Important to note, while GSA categorized and tabulated inconsistencies, it altered no data for the purpose of the analysis.**

**Code:**

# Load necessary libraries

library(dplyr)

library(stringr)

# Define the file path variable

file\_path <- "YOUR\_FILE\_PATH\_HERE" # Replace with the actual file path

# Read the data from the file path

data <- read.csv(file\_path, header = TRUE, stringsAsFactors = FALSE)

# Remove the second row (duplicate header row)

data <- data[-2, ]

# Identify and rename duplicate column names

duplicated\_columns <- names(data)[duplicated(names(data))]

names(data)[duplicated(names(data))] <- make.unique(names(data)[duplicated(names(data))])

# Remove columns with blank or empty headings

data <- data[, !sapply(data, function(x) all(is.na(x) | x == ""))]

# Create an empty data frame to store validation results

validation\_results <- data.frame(Check = character(0), Result = character(0), Column = character(0))

# Specify columns to convert to numeric

numeric\_columns <- c("Q66", "Q67", "Q68", "Q63", "Q73", "Q74", "Q75", "Q70", "Q69", "Q62", "Q63", "Q64", "Q66", "Q67", "Q68", "Q95", "Q99")

# Function to safely convert columns to numeric

safe\_as\_numeric <- function(x) {

as.numeric(as.character(x))

}

# Convert specified columns to numeric, handling non-numeric values gracefully

for (col in numeric\_columns) {

data[[col]] <- as.numeric(data[[col]])

data[[col]][is.na(data[[col]])] <- 0

}

# Define a function to add failed results to the validation data frame

add\_failed\_result <- function(check\_name, result, column, message) {

if (nrow(result) > 0) {

result$Validation <- check\_name

result$Column <- column

result$Result <- message

validation\_results <<- rbind(validation\_results, result)

}

}

# Data Quality Checks

# Validation 1.1: If Q3 starts with "a)", then Q1 should be equal to or greater than 1.

result <- data %>%

filter(startsWith(Q3, "a)") & Q1 < 1)

add\_failed\_result("1.1", result, "Q1", "Q3 starts with 'a)' but Q1 is less than 1")

# Validation 1.2: If Q3 starts with "b)", then Q1 should be greater than 0.

result <- data %>%

filter(startsWith(Q3, "b)") & Q1 <= 0)

add\_failed\_result("1.2", result, "Q1", "Q3 starts with 'b)' but Q1 is not greater than 0")

# Validation 2.1: If Q10 starts with "b)”, then Q66 should be equal to 0.

result <- data %>%

filter(startsWith(Q10, "b") & Q66 != 0)

add\_failed\_result("2.1", result, "Q66", "Q10 starts with 'b)' but Q66 is not equal to 0")

# Validation 2.2: If Q10 starts with "b)", then Q68 should be equal to 0.

result <- data %>%

filter(startsWith(Q10, "b") & Q68 != 0)

add\_failed\_result("2.2", result, "Q68", "Q10 starts with 'b)' but Q68 is not equal to 0")

# Validation 2.3: If Q10 starts with "b)", then Q73 should be equal to 0.

result <- data %>%

filter(startsWith(Q10, "b)") & Q73 != 0)

add\_failed\_result("2.3", result, "Q73", "Q10 starts with 'b)' but Q73 is not equal to 0")

# Validation 2.4: If Q10 starts with "b)", then Q75 should be equal to 0.

result <- data %>%

filter(startsWith(Q10, "b)") & Q75 != 0)

add\_failed\_result("2.4", result, "Q75", "Q10 starts with 'b)' but Q75 is not equal to 0")

# Validation 2.5: If Q10 starts with "b)", then Q48 should start with "a)", "f)", or "g)".

result <- data %>%

filter(startsWith(Q10, "b)") & !(Q48 %in% c("a)", "f)", "g)")))

add\_failed\_result("2.5", result, "Q48", "Q10 starts with 'b)' but Q48 does not start with 'a)', 'f)', or 'g)'")

# Validation 3.1: If Q13 contains "f)", then Q67 should be equal to 0.

result <- data %>%

filter(str\_detect(Q13, "f\\)") & Q67 != 0)

add\_failed\_result("3.1", result, "Q67", "Q13 contains 'f)' but Q67 is not equal to 0")

# Validation 3.2: If Q13 contains "f)", then Q68 should be equal to 0.

result <- data %>%

filter(str\_detect(Q13, "f\\)") & Q68 != 0)

add\_failed\_result("3.2", result, "Q68", "Q13 contains 'f)' but Q68 is not equal to 0")

# Validation 3.3: If Q13 contains "f)", then Q74 should be equal to 0.

result <- data %>%

filter(str\_detect(Q13, "f\\)") & Q74 != 0)

add\_failed\_result("3.3", result, "Q74", "Q13 contains 'f)' but Q74 is not equal to 0")

# Validation 3.4: If Q13 contains "f)", then Q75 should be equal to 0.

result <- data %>%

filter(str\_detect(Q13, "f\\)") & Q75 != 0)

add\_failed\_result("3.4", result, "Q75", "Q13 contains 'f)' but Q75 is not equal to 0")

# Validation 3.5: If Q13 contains "f)", then Q47 should start with "a)", "f)", or "g)".

result <- data %>%

filter(str\_detect(Q13, "f\\)") & !(Q47 %in% c("a)", "f)", "g)")))

add\_failed\_result("3.5", result, "Q47", "Q13 contains 'f)' but Q47 does not start with 'a)', 'f)', or 'g)'")

# Validation 4.1: If Q52 starts with "c)", "d)", or "e)", then Q101 should be equal to or greater than 50.

result <- data %>%

filter((startsWith(Q52, "c)") | startsWith(Q52, "d)") | startsWith(Q52, "e)")) & Q101\_1\_TEXT < 50)

add\_failed\_result("4.1", result, "Q101", "Q52 starts with 'c)', 'd)', or 'e)' but Q101 is less than 50")

# Validation 5.1: Check the sum of Q66, Q67, Q68, and Q63.

result <- data %>%

filter(!is.na(Q66) & !is.na(Q67) & !is.na(Q68) & !is.na(Q63)) %>%

filter((Q66 + Q67 + Q68) != Q63)

add\_failed\_result("5.1", result, "Q66 + Q67 + Q68", "The sum of Q66, Q67, and Q68 is not equal to Q63")

# Validation 6.1: If the percentage of Q66 relative to Q63 is greater than 75%, then Q64 should not be 100%.

result <- data %>%

filter(Q66 / Q63 > 0.75 & Q64 == 100)

add\_failed\_result("6.1", result, "Q66", "The percentage of Q66 relative to Q63 is greater than 75%, but Q64 is 100%")

# Validation 6.2: If the percentage of Q66 relative to Q63 is greater than 75%, then we may question the validity of the Q64 response.

result <- data %>%

filter(Q66 / Q63 > 0.75)

add\_failed\_result("6.2", result, "Q66", "The percentage of Q66 relative to Q63 is greater than 75%, so we may question the validity of the Q64 response")

# Validation 7.1: Check if the sum of Q73, Q74, and Q75 equals Q70.

result <- data %>%

filter(!is.na(Q73) & !is.na(Q74) & !is.na(Q75) & !is.na(Q70)) %>%

filter((Q73 + Q74 + Q75) != Q70)

add\_failed\_result("7.1", result, "Q73 + Q74 + Q75", "The sum of Q73, Q74, and Q75 is not equal to Q70")

# Validation 8.1: If the percentage of Q73 relative to Q70\_1\_TEXT is greater than 75%, then Q71 should not be 100%.

result <- data %>%

mutate(

Q73 = as.numeric(Q73),

Q70\_1\_TEXT = tryCatch(as.numeric(Q70\_1\_TEXT), error = function(e) NA)

) %>%

filter(Q73 / coalesce(Q70\_1\_TEXT, 0) > 0.75 & Q71 == 100)

add\_failed\_result("8.1", result, "Q71", "The percentage of Q73 relative to Q70\_1\_TEXT is greater than 75%, but Q71 is 100%")

# Validation 8.2: If Q73 is equal to or greater than 75%, then we may question the validity of the Q71 response.

result <- data %>%

mutate(

Q73 = tryCatch(as.numeric(Q73), error = function(e) NA)

) %>%

filter(Q73 >= 0.75)

add\_failed\_result("8.2", result, "Q73", "If Q73 is equal to or greater than 75%, then we may question the validity of the Q71 response")

# Validation 9.1: If data is entered in Q78A\_3\_TEXT, then there should also be some data entered into Q69\_1\_TEXT.

result <- data %>%

filter(!is.na(Q78A\_3\_TEXT) & Q78A\_3\_TEXT != "") %>%

filter(is.na(Q69\_1\_TEXT) | Q69\_1\_TEXT == "")

add\_failed\_result("9.1", result, "Q78A\_3\_TEXT", "Data is entered in Q78A\_3\_TEXT, but Q69\_1\_TEXT is empty")

# Validation 9.2: If data is entered in Q78A\_3\_TEXT, then there should also be some data entered into Q70\_1\_TEXT.

result <- data %>%

filter(!is.na(Q78A\_3\_TEXT) & Q78A\_3\_TEXT != "") %>%

filter(is.na(Q70\_1\_TEXT) | Q70\_1\_TEXT == "")

add\_failed\_result("9.2", result, "Q78A\_3\_TEXT", "Data is entered in Q78A\_3\_TEXT, but Q70\_1\_TEXT is empty")

# Validation 9.3: If data is entered in Q78A\_3\_TEXT, there should also be some data entered into Q71.

result <- data %>%

filter(!is.na(Q78A\_3\_TEXT) & Q78A\_3\_TEXT != "") %>%

filter(is.na(Q71) | Q71 == "")

add\_failed\_result("9.3", result, "Q78A\_3\_TEXT", "Data is entered in Q78A\_3\_TEXT, but Q71 is empty")

# Validation 10.1: Q96 should not be a higher number than what is entered in Q95.

result <- data %>%

filter(Q96\_1\_TEXT > Q95\_1\_TEXT)

add\_failed\_result("10.1", result, "Q96", "Q96 is greater than Q95")

# Validation 10.2: Q97 should not be a higher number than what is entered in Q95.

result <- data %>%

filter(Q97\_1\_TEXT > Q95\_1\_TEXT)

add\_failed\_result("10.2", result, "Q97", "Q97 is greater than Q95")

# Validation 11.1: Q100 should not be a higher number than what is entered in Q99.

result <- data %>%

filter(Q100\_1\_TEXT > Q99\_1\_TEXT)

add\_failed\_result("11.1", result, "Q100", "Q100 is greater than Q99")

# Save only the failed validation results as a CSV file

failed\_validation\_results <- validation\_results[nrow(validation\_results) > 0, ]

if (nrow(failed\_validation\_results) > 0) {

validation\_results\_file <- "failed\_validation\_results.csv"

write.csv(failed\_validation\_results, file = validation\_results\_file, row.names = FALSE)

}

**Table S1** provides an overview of data validation tests performed by the R script. Each test is uniquely identified by a number consisting of two parts: the whole number and the decimal. The whole number denotes the general category or group of tests, while the decimal distinguishes individual conditions within the general category. Each check is also accompanied by a descriptive title. The "Validation Rationale" column explains the purpose of each validation test, detailing the specific conditions and criteria being examined within the reporting entity’s data. The "Count" column indicates the number of validation failures per validation test. Lastly, “Implications” details the possible impact of the validation failures.

**Table S1. Summary of validation tests**

| **Number** | **Title** | **Validation Rationale** | **Total Count of Respondents with Validation Failures** | **Implications** |
| --- | --- | --- | --- | --- |
| 1.1 | Check for Q3 "a)" and Q1 | If an entity claims to have a full-time Section 508 Program Manager (PM) dedicated to the entity’s Section 508 Program (Q3), it should have at least 1.0 Full Time Equivalent (FTE) in its Section 508 Program (Q1). | 7 | Entity may have underreported Federal FTEs or overreported having a full-time Section 508 PM due to the same Section 508 PM assigned to multiple entities as defined in this report, or a Section 508 PM who is supposed to be full time but has other assigned duties that significantly limit their ability to perform full-time Section 508 PM duties. |
| 1.2 | Check for Q3 "b)" and Q1 | If an entity claims to have a part-time Section 508 PM dedicated to the entity‘s Section 508 Program (Q3), it should report more than 0.0 FTEs in its Section 508 Program (Q1). | 11 | Entities may have underreported federal FTEs, likely due to the limited amount of hours spent by the Section 508 PM per week and thus the entity selected 0 instead of a fraction less than 1, or overreported having a part-time Section 508 PM. |
| 2.1 | Dependencies for automated accessibility testing (Condition 1) | If an entity selects "b) No" in Q10 to indicate it does not use an automated accessibility testing tool, it should report "0" for the number of public internet web pages evaluated exclusively through automated testing (Q66). | 16 | Entities may have misunderstood the testing tool referenced in Q10 and Q66, leading to lower confidence in results noted in Q64-Q69.  Entities may utilize another entity to perform public internet testing such as a parent agency. |
| 2.2 | Dependencies for automated accessibility testing (Condition 2) | If an entity selects "b) No" in Q10 to indicate it does not use an automated accessibility testing tool, it should report "0" for the number of public internet web pages evaluated through both automated and manual testing (Q68). | 24 | Entities may have misunderstood the testing tool referenced in Q10 and Q68 or may utilize semi-automated developer tools that combine both automated tests a user must run manually, coupled with manual testing.  Entities may utilize another entity to perform public internet testing such as a parent agency. |
| 2.3 | Dependencies for automated accessibility testing (Condition 3) | If an entity selects "b) No" in Q10 to indicate it does not use an automated accessibility testing tool, it should report "0" for the number of internal intranet web pages evaluated exclusively through automated testing (Q73). | 5 | Entities may have misunderstood the testing tool referenced in Q10 and Q73, leading to lower confidence in results noted in Q71-Q75.  Entities may utilize another entity to perform public internet testing such as a parent agency. |
| 2.4 | Dependencies for automated accessibility testing (Condition 4) | If an entity selects "b) No" in Q10 to indicate it does not use an automated accessibility testing tool, it should report "0" for the number of internal intranet web pages evaluated through both automated and manual testing (Q75). | 10 | Entities may have misunderstood the testing tool referenced in Q10 and Q75 or may utilize semi-automated developer tools that combine both automated tests a user must run manually, coupled with manual testing.  Entities may utilize another entity to perform public internet testing such as a parent agency. |
| 2.5 | Dependencies for automated accessibility testing (Condition 5) | If an entity selects "b) No" in Q10 to indicate it does not use an automated accessibility testing tool, it should align with how often it uses automated testing tools and report "a) entity never conducts automated tests on web content for Section 508 conformance," "f) Unknown," or "g) N/A - entity does not publish or maintain any web content" in Q48. | 95 | Entities may have misunderstood the testing tool referenced in Q10 and Q48 or may utilize semi-automated developer tools that combine both automated tests a user must run manually, coupled with manual testing.  Entities may utilize another entity to perform testing such as a parent agency. |
| 3.1 | Dependencies for manual testing (Condition 1) | If an entity indicates it does not use a manual or hybrid testing methodology by selecting "f) N/A - entity does not use a manual and/or hybrid testing methodology" in Q13, then it should report "0" for the number of public internet web pages evaluated by only manual testing (Q67). | 9 | Entities may have misunderstood the testing tool referenced in Q13 and Q67, possibly leading to overreporting the number of pages for Q67, performing manual testing without a manual or hybrid testing methodology, or not reporting the presence of a manual or hybrid testing methodology for Q13 despite having one. This leads to low confidence in the data reported for both criteria. |
| 3.2 | Dependencies for manual testing (Condition 2) | If an entity indicates that it does not use a manual or hybrid testing methodology by selecting "f) N/A - entity does not use a manual and/or hybrid testing methodology" in Q13, then it should report "0" for the number of public internet web pages evaluated by a combination of both automated and manual testing (Q68). | 15 | Entities may have misunderstood the testing tool referenced in Q13 and Q68, leading possibly to overreporting the number of pages for Q68, performing manual testing without a manual or hybrid testing methodology, or not reporting the presence of a manual or hybrid testing methodology for Q13 despite having one. This leads to low confidence in the data reported for both criteria. |
| 3.3 | Dependencies for manual testing (Condition 3) | If an entity indicates it does not use a manual or hybrid testing methodology by selecting "f) N/A - entity does not use a manual and/or hybrid testing methodology" in Q13, then it should report "0" for the number of internal intranet web pages evaluated by manual testing (Q74). | 2 | Entities may have misunderstood the testing tool referenced in Q13 and Q74, leading possibly to overreporting the number of pages for Q74, performing manual testing without a manual or hybrid testing methodology, or not reporting the presence of a manual or hybrid testing methodology for Q13 despite having one. This leads to low confidence in the data reported for both criteria. |
| 3.4 | Dependencies for manual testing (Condition 4) | If an entity indicates it does not use a manual or hybrid testing methodology by selecting "f) N/A - entity does not use a manual and/or hybrid testing methodology" in Q13, then it should report "0" for the number of internal intranet web pages evaluated by a combination of both automated and manual testing (Q75). | 3 | Entities may have misunderstood the testing tool referenced in Q13 and Q75, leading possibly to overreporting the number of pages for Q75, performing manual testing without a manual and/or hybrid testing methodology, or not reporting the presence of a manual or hybrid testing methodology for Q13 despite having one. This leads to low confidence in the data reported for both criteria. |
| 3.5 | Dependencies for manual testing (Condition 5) | If an entity indicates it does not use a manual or hybrid testing methodology by selecting "f) N/A - Entity does not use a manual and/or hybrid testing methodology" in Q13, it should align with how often it uses manual testing tools and report "a) entity never conducts comprehensive manual tests on web content for Section 508 conformance," "f) Unknown," or "g) N/A - Entity does not publish or maintain any web content" in Q47. | 54 | Entities may have misunderstood the testing tool referenced in Q10 and Q47 or may utilize semi-automated developer tools that combine both automated tests a user must run manually, coupled with manual testing.  Entities may utilize another entity to perform testing such as a parent agency. |
| 4.1 | Q52 and Q101 parity check | If an entity indicates "c) ICT Accessibility requirements are regularly included in solicitations according to entity procurement standards," "d) ICT Accessibility requirements are frequently included in solicitations according to entity procurement standards," or "e) ICT Accessibility requirements are almost always included in solicitations according to entity procurement standards and perform regular audits/reviews to ensure solicitations include appropriate accessibility requirements" for Q52, then it should report at least 50% of its last ten solicitations included all applicable Section 508 requirements (Q101\_1\_TEXT). | 160 | Entities are not including ICT accessibility requirements in the solicitations process. A significant number of data validation flags in this check include entities who selected of “c”, “d”, or “e” but selected “Unknown” for Q101, implying that while a process may be in place, there is no mechanism to validate ICT language is actually included in solicitations. |
| 5.1 | Check the sum of Q66, Q67, Q68 | The number of public internet web pages evaluated with automated testing (Q66), manual testing (Q67), and combined automated and manual testing (Q68) should add up to the total number of public internet web pages evaluated for Section 508 conformance (Q63). | 90 | Entities did not understand differences in terminology, leading to an unclear testing methodology. |
| 6.1 | Q64 and Q66 relationship (Condition 1) | If the percentage of public internet web pages evaluated with automatic testing tools (Q66) compared to the total number of public internet web pages evaluated for Section 508 conformance (Q63) is greater than 75%, then 100% of these pages should not fully conform to Section 508 standards (Q64). Some aspects of web conformance can only be evaluated manually. | 8 | Entities who relied heavily on using only automated accessibility testing tools may have overinflated conformance to Section 508 web requirements; automated tools do not test for every Section 508 standard and thus roughly 70% of Section 508 web standards were not tested. |
| 6.2 | Q64 and Q66 relationship (Condition 2) | If the percentage of public internet web pages evaluated with automatic testing tools (Q66) compared to the total number of public internet web pages evaluated for Section 508 conformance (Q63) is greater than 75%, then we can question the extent to which these pages fully conform to Section 508 standards (Q64). Some aspects of web conformance can only be evaluated manually. | 117 | Entities who relied heavily on using only automated accessibility testing tools may have overinflated conformance to Section 508 web requirements; automated tools do not test for every Section 508 standard and thus roughly 70% of Section 508 web standards were not tested. |
| 7.1 | Check the sum of Q73, Q74, and Q75 | The number of internal intranet web pages evaluated with automated testing (Q73), manual testing (Q74), and combined automated and manual testing (Q75) should add up to the total number of internal intranet web pages evaluated for Section 508 conformance (Q70\_1\_TEXT). | 100 | Misunderstanding of terminology reduces the confidence level in understanding how many pages were tested with only an automated tool. Some aspects of web conformance can only be evaluated manually, thus possibly overinflating conformance when utilizing only automated testing tools. |
| 8.1 | Q71 and Q73 relationship (Condition 1) | If the percentage of internal internet web pages evaluated with automatic testing tools (Q73) compared to the total number of internal internet web pages evaluated for Section 508 conformance (Q70\_1\_TEXT) is greater than 75%, then 100% of these pages should not fully conform to Section 508 standards (Q71). Some aspects of web conformance can only be evaluated manually. | 6 | Entities who relied heavily on using only automated accessibility testing tools may have overinflated conformance to Section 508 web requirements; automated tools do not test for every Section 508 standard and thus roughly 70% of Section 508 web standards were not tested. |
| 8.2 | Q71 and Q73 relationship (Condition 2) | If the percentage of internal internet web pages evaluated with automatic testing tools (Q73) compared to the total number of internal internet web pages evaluated for Section 508 conformance (Q70\_1\_TEXT) is greater than 75%, then we can question the extent to which these pages fully conform to Section 508 standards (Q71). Some aspects of web conformance can only be evaluated manually. | 38 | Entities who relied heavily on using only automated accessibility testing tools may have overinflated conformance to Section 508 web requirements; automated tools do not test for every Section 508 standard and thus roughly 70% of Section 508 web standards were not tested. |
| 9.1 | Data Entry Validation for Q78A\_3\_TEXT (Condition 1) | If an entity provides data on how many of its top ten viewed internal intranet pages were analyzed for conformance (Q78A\_3\_TEXT), then the entity should also provide data on the number of entity-owned and operated web pages published to its intranet (Q69\_1\_TEXT). | 8 | Entities did not know how to estimate the total number of internal intranet pages, leading to low confidence in the entity’s ability to find the top ten most viewed internal intranet pages. The assumption is that an entity may not have been able to select the top ten most viewed intranet pages based on site hits. |
| 9.2 | Data Entry Validation for Q78A\_3\_TEXT (Condition 2) | If an entity reports on how many of its top ten most viewed internal intranet pages were analyzed for conformance (Q78A\_3\_TEXT), then the entity should also provide data on the number of entity-owned and operated intranet websites evaluated for Section 508 conformance (Q70\_1\_TEXT). | 11 | Entities do not have a testing process in place to test internal intranet pages, however the entity performed testing outside of the reporting period in order to test their top ten most viewed internal intranet pages. |
| 9.3 | Data Entry Validation for Q78A\_3\_TEXT (Condition 3) | If an entity reports on how many of its top ten most viewed internal intranet pages were analyzed for conformance (Q78A\_3\_TEXT), the entity should also report the percentage of internal intranet web pages, of those evaluated, that fully conform to Section 508 standards. | 18 | Entities do not have a testing process in place to test internal intranet pages, however the entity performed testing outside of the reporting period in order to test their top ten most viewed internal intranet pages. |
| 10.1 | Q96\_1\_TEXT and Q95\_1\_TEXT relationship | The number of employee or applicant-filed Section 508 non-compliance complaints (Q96\_1\_TEXT) should not exceed the number of total Section 508 non-compliance complaints (Q95\_1\_TEXT). | 1 | Entity possibly miscounted the total number of Section 508 complaints or the employee or applicant filed Section 508 complaints within the reporting period. |
| 10.2 | Q97\_1\_TEXT and Q95\_1\_TEXT relationship | The number of employee or applicant-filed Section 508 non-compliance complaints that were successfully addressed, resolved, or adjudicated by the entity (Q97\_1\_TEXT) should not exceed the number of total Section 508 non-compliance complaints (Q95\_1\_TEXT). | 4 | Entities may have incorrectly counted Section 508 complaints from prior reporting periods in their overall resolved count, or may have miscounted the total number of Section 508 complaints and/or the employee or applicant filed Section 508 complaints within the reporting period. |
| 11.1 | Q100\_1\_TEXT and Q99\_1\_TEXT relationship | The number of feedback responses about Section 508 accessibility issues that were received through the standard feedback mechanism on an entity’s website that were successfully addressed, resolved, or adjudicated (Q100\_1\_TEXT) should not exceed the total number of such feedback responses (Q99\_1\_TEXT). | 4 | Entities may have incorrectly counted feedback responses from prior reporting periods in their overall resolved count, or may have miscounted the total number of feedback responses submitted within the reporting period. |

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1. R is a free software for statistical computing and graphics. [↑](#footnote-ref-1)