Search■To■Solve Exam Guide for R (Where the Code Comes From)

1. Why This Guide Exists

This PDF explains how to solve any R exam question WITHOUT using AI by learning how to search the web ef
It covers:
• What to search
• How searches map to real tidyverse functions
• How the code you use in exams is derived from documentation and examples online.

2. Core Search Phrase Example

```
Search phrase:
    R dplyr filter count n_distinct example
```

Why this phrase?
• 'filter' removes rows with missing values.
• 'count' groups and counts observations by category.
• 'n_distinct' counts unique values (e.g., number of countries).
These are exactly the tools needed to answer questions like:
"Filter missing values, count cities, count countries, and rank countries by number of cities."

3. What You Will See When You Search

When you Google that phrase, you will find:
• tidyverse documentation pages
• StackOverflow examples
• R for Data Science tutorials

```
These ALWAYS show examples such as:
    df %>% filter(!is.na(x))
    df %>% count(group)
    n_distinct(df$group)
```

4. How the Code Is Built from Search Results

```
Example exam task:
"Filter missing values and count how many cities and countries remain."
```

```
From documentation:
1) Filter rows:
    df %>% filter(!is.na(emissions_pc), !is.na(population))
```

```
2) Count unique countries:
    n_distinct(df$country)
```

```
3) Count rows per country:
    df %>% count(country, sort = TRUE)
```

```
4) Total remaining cities:
    nrow(df)
```

5. Final Combined Code

```
df_clean <- df %>% filter(!is.na(emissions_pc), !is.na(population))

n_cities <- nrow(df_clean)
n_countries <- n_distinct(df_clean$country)

country_counts <- df_clean %>% count(country, sort = TRUE)
```

6. Why This Works

```
Because EVERY part of this code matches official tidyverse patterns.
These patterns appear in:
• https://dplyr.tidyverse.org
• https://ggplot2.tidyverse.org
• https://r4ds.hadley.nz
• StackOverflow threads

You are learning how to RECONSTRUCT exam answers from public documentation.
```

7. Additional Search Phrases for the Exam

```
Use these when stuck:

• R ggplot histogram geom_vline example
• R ggplot scatterplot geom_smooth example
• R dplyr group_by summarise median example
• R pivot_longer wide to long example
• R lm regression polynomial interaction example
• R AIC model comparison example

These phrases directly generate examples identical to the tasks in your exam.
```

8. The Exam Survival Process

```
STEP 1 — Identify the task type.
STEP 2 — Search the phrase.
STEP 3 — Copy the pattern from examples.
STEP 4 — Replace variable names with your own.
STEP 5 — Write a 1–2 sentence interpretation.

This guarantees full marks even without prior R knowledge.
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