Homework Grading Report

Student Name:	Code_Examples_Test
Assignment:	Test Assignment - Code Examples
Graded On:	September 27, 2025 at 09:56 PM
Final Score:	34.5 / 37.5 points (92.0%)

Score Summary

Overall Performance: Excellent (92.0%)

Instructor Assessment

Excellent work with strong technical implementation.

Reflection & Critical Thinking

- Great critical thinking demonstrated

Analytical Strengths

- Comprehensive completion of requirements

Recommendations for Future Work

- Continue excellent work

Technical Analysis

Code Strengths:

- Proper implementation of R library loading and data import procedures
- Effective use of dplyr functions for data manipulation

Code Improvement Suggestions:

- Consider using complete.cases() for more robust missing data handling

Example:

```
# Remove rows with missing values
clean_data <- sales_df[complete.cases(sales_df), ]
# Or check for missing values first
sum(is.na(sales_df))
```

- Explore the cut() function for creating categorical variables from continuous data

Example:

```
# Create categorical variables from continuous data
sales_df$amount_category <- cut(sales_df$amount,
breaks = c(0, 100, 500, 1000, Inf),
labels = c('Low', 'Medium', 'High', 'Very High'))
```

- Add correlation analysis using cor() to quantify relationships between variables

Example:

```
# Calculate correlation between numeric variables
cor(sales_df$amount, sales_df$rating, use = 'complete.obs')
# Or correlation matrix
cor(sales_df[, c('amount', 'rating', 'quantity')])
```

- Include additional summary statistics such as standard deviation and quartiles

Example:

```
# Additional summary statistics
sd(sales_df$amount, na.rm = TRUE) # Standard deviation
quantile(sales_df$amount, na.rm = TRUE) # Quartiles
IQR(sales_df$amount, na.rm = TRUE) # Interquartile range
```

- Use read_csv() directly without setting working directory for more portable code

Example:

```
# More portable approach (no setwd needed)
library(here)
sales_df <- read_csv(here('data', 'sales_data.csv'))
# Or use relative paths
sales_df <- read_csv('data/sales_data.csv')
```

Technical Observations:

- Demonstrates solid understanding of fundamental R programming concepts
- Code structure follows logical analytical workflow

Additional Code Enhancement Examples:

Data Exploration Enhancement:

```
# More comprehensive data inspection
glimpse(sales_df) # dplyr alternative to str()
skimr::skim(sales_df) # Detailed summary statistics
DataExplorer::plot_missing(sales_df) # Visualize missing data
```

Data Visualization:

```
# Basic plots for data exploration
ggplot(sales_df, aes(x = amount)) + geom_histogram()
ggplot(sales_df, aes(x = category, y = amount)) + geom_boxplot()
```

Data Cleaning:

```
# Handle missing values
sales_df <- sales_df %>%
filter(!is.na(amount)) %>%
mutate(amount = ifelse(amount < 0, 0, amount))
```

Performance by Category