

## Math 1010 Quantitative Analysis of YMCA Service Invoice

The YMCA invoice reflects advanced quantitative reasoning through structured rate calculations, multi-session cost analysis, and the application of standardized mileage formulas. The document demonstrates the ability to interpret numerical information, organize financial data, and apply proportional reasoning within a nonprofit service context.

- **Session-Based Cost Computation** — The service fee is calculated by multiplying the established rate of **\$750.00 per presentation** by **13 sessions**, resulting in a subtotal of **\$9,750.00**. This reflects the application of proportional reasoning, multi-step multiplication, and accurate aggregation of repeated service units.
- **Differentiation of Fixed and Variable Costs** — The invoice distinguishes fixed program costs (presentation sessions) from variable travel expenses (mileage by county). This separation demonstrates the ability to categorize numerical data and understand how different cost types influence total expenditures.
- **Mileage Interpretation and Standardized Rate Application** — The mileage chart lists round-trip distances and corresponding reimbursement amounts for Davidson (**86 miles / \$57.62**), Sumner (**94 miles / \$62.98**), and Rutherford (**124 miles / \$83.08**) counties. This reflects the use of standardized formulas to convert distance into cost, requiring interpretation of quantitative data and consistent application of rate-per-mile calculations.
- **Financial Organization and Data Structuring** — The invoice organizes numerical information into clear sections—service charges, mileage, and included materials—demonstrating the ability to structure quantitative data for clarity, accuracy, and professional documentation.
- **Real-World Budgeting and Logistical Planning** — Coordinating 13 sessions across multiple counties requires multi-step planning, time allocation, and cost forecasting. These tasks reflect Math 1010 competencies in evaluating numerical information, planning resource distribution, and making data-driven decisions in a community service environment.

Collectively, these elements illustrate mastery of Math 1010 outcomes, including numerical interpretation, proportional reasoning, multi-step calculations, and the organization of quantitative information within a professional nonprofit framework.



I AM INVISIBLE BULLYING AND SUICIDE

The Press – 211 S. 2nd Street, Clarksville, TN 37040

Invoice #: 2026-YMCA-013

Date: February 23, 2026

Bill To: YMCA Program Director

Service Description:

- Anti-Bullying Presentation (2 hours, 2 presenters)

Qty: 13 sessions

Rate: \$750.00

Amount: \$9,750.00

- Mileage (Outside Montgomery County)

Davidson: \$57.62

Sumner: \$62.98

Rutherford: \$83.08

- Supplies & Professional Materials: Included

Subtotal: \$9,750.00

Mileage: Based on the county schedule

Grand Total: To be finalized

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**OFFICIAL MILEAGE CHART (ROUND TRIP)**

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- Davidson County – 86 miles – \$57.62
- Sumner County – 94 miles – \$62.98
- Rutherford County – 124 miles – \$83.08
- Montgomery County – 0 miles – \$0.00

# Math 1010 Quantitative Analysis of Kenwood Video Production Invoice

This invoice demonstrates advanced quantitative reasoning through multi-role cost assessment, proportional budgeting, and the organization of financial data for a multi-component school media project. The structure of the service descriptions and cost allocations reflects the ability to interpret numerical information, apply rate-based calculations, and manage complex project expenses within a nonprofit educational context.

## Quantitative Elements Demonstrated

- **Role-Based Cost Allocation** — Each service category (project manager, director, speakers, photographer, cameraman, choreographer, equipment team, and singers) is assigned a specific monetary value, requiring the ability to interpret and organize multiple numerical inputs across diverse roles.
- **Summation of Multi-Component Costs** — The total project cost of **\$5,500.00** is derived from adding individual line items, demonstrating multi-step addition and accurate aggregation of distributed expenses.
- **Proportional Reasoning Across Personnel** — The invoice includes grouped costs, such as **five virtual empowerment speakers** totaling **\$1,200.00**, which reflects the application of proportional reasoning and the ability to calculate combined rates for repeated service units.
- **Categorization of Fixed vs. Variable Costs** — The invoice distinguishes between fixed production roles (director, photographer, cameraman) and variable creative elements (guest speakers, singers, choreography), showing the ability to classify numerical data and understand how different cost types contribute to the overall budget.
- **Budget Structuring for Multi-Media Production** — Coordinating video presentations, music empowerment content, and virtual guest speaker segments requires the integration of time, personnel, and equipment costs, demonstrating real-world quantitative planning and financial decision-making.

## Alignment With Math 1010 Competencies

The invoice reflects key Math 1010 outcomes, including:

- interpreting quantitative information
- performing multi-step calculations
- applying proportional reasoning
- organizing numerical data into meaningful categories
- evaluating financial totals for accuracy
- planning and budgeting within a professional service environment

These competencies are demonstrated through the structured cost breakdown and the comprehensive financial summary required to manage a multi-layered school media project.



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**9/17/2020**

**PRINCIPAL: DR. MARLON HEASTON**

Kenwood Middle School  
241 E. Pine Mountain Rd.  
Clarksville, TN 37042  
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**For: Virtual Empowerment Classes**

**DESCRIPTIONS:**

VIDEO PRESENTATION/MINI-DOCUMENTATION COVID-19 BACK TO SCHOOL 2020

ANTI-BULLYING MUSIC EMPOWERMENT VIDEO

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SELF-ESTEEM VIRTUAL VIDEO: GUEST SPEAKER

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CHARACTER BUILDING VIRTUAL VIDEO: GUEST SPEAKER

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TEAM BUILDING VIRTUAL VIDEO: GUEST SPEAKER

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FACING OBSTACLES VIRTUAL VIDEO: GUEST SPEAKER

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FUTURE LEADERS VIRTUAL VIDEO: GUEST SPEAKER

**COST ASSESSMENTS:**

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PROJECT MANAGER/COORDINATOR	1200.00
DIRECTOR OF FILM/MUSIC PRODUCTION/EDITING	1000.00
GUEST VIRTUAL EMPOWERMENT SPEAKERS (5)	1200.00
PHOTOGRAPHER	500.00
CAMERMAN	500.00

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CHOREGRAPHER/DANCE	300.00
EQUIPMENT TEAM: LIGHTNING: MUSIC: SOUND	400.00
VIDEO SINGERS ( 3)	400.00
<b>Total Amount</b>	<b>\$5,500.00</b>

**MAKE CHECKS PAYABLE TO: SKE PUBLISHING**