Vocabulary Review Sheet

Lesson – Algebraic Expressions and Fair Budgets

How to Use

- Review each term and example before your quiz.
- Study how **math**, **real-life**, and **fairness** examples connect to understand how algebra helps communities make fairer financial decisions.
- Keep this sheet in your *Equity in Numbers Student Journal* as a math + equity reference page.
- Remember: *Expressions tell a story about how money flows — who has enough and who might need more support.*

Algebraic Expression

- **Definition:** A combination of numbers, variables, and operations that shows a relationship, but doesn't have an equal sign.
- **Math Examples:**
  - (E = 1,000 + 400 + 300 + 0.1I)
  - (R = I - E)
  - (T = 2x + 3y + 100)
- **Real-Life Example:** Representing a family's total monthly expenses as an expression.
- **Fairness Example:** Expressions help compare budgets fairly, showing which families face higher basic costs.

Variable

- **Definition:** A symbol (usually a letter) that represents an unknown or changeable number.
- **Math Examples:**

  - (I) = income; (E) = expenses; (S) = savings.
  - (E = 800 + 300 + 0.15I)
- **Real-Life Example:** Variables help model budgets that change each month.
- **Fairness Example:** Using variables shows flexibility — because not all families have fixed, equal incomes.

Income (I)

- **Definition:** The total money earned or received.
- **Math Examples:**
  - (I = 3,000) or (I = 4,000)
  - (R = I - E)
- **Real-Life Example:** A parent's paycheck or school's funding grant.
- **Fairness Example:** Comparing incomes helps us see how earning differences affect opportunities.

Expenses (E)

- **Definition:** The total amount of money spent on needs and wants.
- **Math Examples:**
  - (E = 1,000 + 400 + 300 + 0.1I)
  - (E = 800 + 200 + 0.05I)
- **Real-Life Example:** Rent, groceries, transportation, or bills.
- **Fairness Example:** When expenses take up most of income, families have less left to save — showing unequal financial stability.

Savings

- **Definition:** The portion of income that is set aside instead of being spent.
- **Math Examples:**

    - Savings = 10% of income → (0.1I)
    - (I - E = R) (Remaining money includes savings.)
- **Real-Life Example:** Putting money in a savings account each month.
- **Fairness Example:** Not every family can save — showing how unequal resources impact future security.

Remaining Balance (R)

- **Definition:** The money left after subtracting expenses from income.
- **Math Examples:**
    - (R = I - E)
    - (R = 3,000 - (1,000 + 400 + 300 + 0.1I))
- **Real-Life Example:** The amount left after paying rent, groceries, and transportation.
- **Fairness Example:** Remaining balances show who can afford extras (like tutoring or vacations) and who can't.

Percent of Income

- **Definition:** The fraction or decimal that shows what part of income goes to a specific category.
- **Math Examples:**
    - 10% of income = (0.10I)
    - 15% of income = (0.15I)
- **Real-Life Example:** Families often spend a percent of income on rent or savings.
- **Fairness Example:** If low-income families spend a higher percent on basic needs, it reveals inequity.

Budget

- **Definition:** A plan for how income will be used to pay for expenses and savings.

- **Math Examples:**
    - Income: (I = 3,500); Expenses: (E = 1,950 + 0.10I); Remaining: (R = I - E)
- **Real-Life Example:** A school budget divides money between supplies, salaries, and student activities.
- **Fairness Example:** Budgets reveal how resources are distributed — showing whether funds are shared equitably.

Fixed Expense

- **Definition:** A cost that stays the same every month.
- **Math Examples:**
    - Rent = $1,000; Internet = $100.
    - (E = 1,000 + 100 + 0.05I)
- **Real-Life Example:** Monthly rent or a car payment.
- **Fairness Example:** Families with lower income feel fixed expenses more sharply than wealthier households.

Flexible Expense

- **Definition:** A cost that can change from month to month.
- **Math Examples:**
    - Groceries = $300 → sometimes $350.
    - (E = 800 + 0.15I) changes as needs change.
- **Real-Life Example:** Food, clothing, or school supplies.
- **Fairness Example:** When budgets are tight, families may need to cut flexible expenses — a sign of financial inequity.

Equity in Budgeting

- **Definition:** Making sure resources are distributed so that everyone gets what they need to live well — not just equal amounts.
- **Math Examples:**
    - School A: (I - E = 100); School B: (I - E = 1,000).
    - Adjusting budgets for need = equity.
- **Real-Life Example:** A district gives more funding to schools with fewer local resources.
- **Fairness Example:** Equity ensures fairness by meeting different needs, not treating everyone identically.

Summary of Math + Fairness Connections

Concept	Math Focus	Fairness Connection
Expression	Combines numbers & variables	Models real budgets clearly
Income & Expenses	Use operations to find totals	Show gaps in opportunity
Savings	Percent of income	Reveals differences in financial security
Remaining Balance	(I - E)	Measures who has extra vs. who struggles
Equity in Budgeting	Applies math to fairness	Promotes just resource distribution