

## Vocabulary Review Sheet

### Lesson – Ratios and Fairness in Internet Access

#### How to Use

- Review each vocabulary word carefully before your quiz.
- Notice how **math examples**, **real-life examples**, and **fairness examples** work together to tell the story of digital access.
- Remember: Ratios help us compare fairly, even when group sizes are different.
- Keep this sheet in your *Equity in Numbers Student Journal* for quick study and reflection.

#### Ratio

- **Definition:** A comparison of two or more quantities showing how many times one value contains another.
- **Math Examples:**
  - 80:20 → simplified to 4:1
  - 70:30 → simplified to 7:3
  - 50:50 → simplified to 1:1
- **Real-Life Example:** Comparing families with vs. without internet access in a neighborhood.
- **Fairness Example:** Ratios show how unequal access to technology can limit learning opportunities.

#### Simplify

- **Definition:** To reduce a ratio to its smallest form by dividing both numbers by the same factor.
- **Math Examples:**
  - 80:20 →  $\div 20$  → 4:1

- $70:30 \rightarrow \div 10 \rightarrow 7:3$
- $60:40 \rightarrow \div 20 \rightarrow 3:2$
- **Real-Life Example:** Simplifying ratios helps communities clearly see patterns of access.
- **Fairness Example:** Simplified ratios make it easier to communicate how big the digital divide is.

### Compare

- **Definition:** To look at two or more ratios and decide which shows more or less of something.
- **Math Examples:**
  - $4:1 > 3:2 > 1:1$
  - Group A (4:1) has better access than Group C (3:2).
- **Real-Life Example:** Comparing ratios shows which communities have stronger internet connections.
- **Fairness Example:** Fair comparison ensures that we look beyond total numbers to focus on equal opportunity.

### Digital Divide

- **Definition:** The gap between people who have access to technology and those who do not.
- **Math Examples:**
  - Group A:  $80:20 \rightarrow$  strong access
  - Group D:  $50:50 \rightarrow$  weaker access
  - Ratio gap =  $4:1 - 1:1 \rightarrow$  big difference in fairness
- **Real-Life Example:** Some students can join online classes easily while others can't connect at all.

- **Fairness Example:** The digital divide shows why schools must support families without reliable internet.

### Wi-Fi Access

- **Definition:** The ability to connect to the internet wirelessly.
- **Math Examples:**
  - Group A: 4:1 → most families online
  - Group B: 7:3 → some offline
  - Group D: 1:1 → half offline
- **Real-Life Example:** A home with Wi-Fi can access online homework, lessons, and communication tools.
- **Fairness Example:** Equal Wi-Fi access means every student can learn and grow digitally, not just a few.

### Divide

- **Definition:** To split one quantity into equal parts or to find how many times one number goes into another.
- **Math Examples:**
  - $80 \div 20 = 4$
  - $60 \div 40 = 1.5 \rightarrow$  ratio 3:2
  - $50 \div 50 = 1 \rightarrow$  ratio 1:1
- **Real-Life Example:** Division helps calculate how many families have internet compared to those without.
- **Fairness Example:** Dividing data fairly reveals patterns of inequality across communities.

### Proportion

- **Definition:** A statement that two ratios are equal or balanced.

- **Math Examples:**
  - $80:20 = 4:1 \rightarrow$  both represent the same relationship.
  - $40:10 = 80:20 \rightarrow$  proportionally equal.
- **Real-Life Example:** If two schools have the same proportion of connected families, their digital access is equally fair.
- **Fairness Example:** Proportions help compare communities of different sizes fairly.

### Equal Access

- **Definition:** When everyone has the same chance to connect and participate online.
- **Math Examples:**
  - $50:50 = 1:1 \rightarrow$  equal with and without internet.
  - Goal: increase ratio to 4:1 or higher for all groups.
- **Real-Life Example:** Every student should have internet access for school assignments.
- **Fairness Example:** Equal access supports educational justice by closing digital gaps.

### Fairness

- **Definition:** Treating everyone equitably by providing what's needed for equal opportunity.
- **Math Examples:**
  - $80:20$  vs  $50:50 \rightarrow$  fairness improves as ratio increases.
  - $4:1$  shows stronger fairness than  $1:1$ .
- **Real-Life Example:** Schools may lend Wi-Fi hotspots to families without internet access.
- **Fairness Example:** Math reveals where fairness needs to grow — ensuring every student can learn online.

**Summary of Math + Fairness Connections**

<b>Concept</b>	<b>Math Focus</b>	<b>Fairness Connection</b>
<b>Ratio</b>	Compares groups	Shows who has or lacks access
<b>Simplify</b>	Reduces ratios	Clarifies inequality levels
<b>Digital Divide</b>	Measures access gap	Highlights fairness challenges
<b>Proportion</b>	Balances data	Compares communities equally
<b>Fairness</b>	Uses numbers to guide action	Supports equity in learning opportunities