

Vocabulary Review Sheet

Lesson – Equations and Fair Pay

How to Use

- Review each term and definition before your quiz.
- Study how **math**, **real-life**, and **fairness** examples connect to the idea of **equal pay for equal work**.
- Keep this sheet in your *Equity in Numbers Student Journal* to review before assessments.
- Remember: *Equations show balance — and fairness means keeping both sides equal in life and math.*

Equation

- **Definition:** A mathematical sentence showing that two expressions are equal, using an equals sign (=).
- **Math Examples:**
 - $(x + 3 = 18)$
 - $(2x + 4 = 10)$
 - $(x - 5 = 12)$
- **Real-Life Example:** Finding out how much someone earns when you know their pay difference.
- **Fairness Example:** Equations help us calculate how much to adjust pay so that everyone earns fairly for the same work.

Variable

- **Definition:** A symbol (usually a letter) that stands for an unknown number.
- **Math Examples:**
 - (x) = Worker B's hourly wage.

- In $(x + 3 = 18)$, (x) is what we are solving for.
- **Real-Life Example:** A company might not know the fair wage yet—so we use a variable until we solve for it.
- **Fairness Example:** Variables represent the *unknowns* in real-world justice—what needs to change for things to be equal.

Solve

- **Definition:** To find the value of a variable that makes the equation true.
- **Math Examples:**
 - $(x + 3 = 18 \rightarrow x = 18 - 3 \rightarrow x = 15)$
 - $(x - 2 = 10 \rightarrow x = 12)$
- **Real-Life Example:** Figuring out what pay rate balances the equation between two workers.
- **Fairness Example:** Solving shows how much change is needed to reach fairness in pay.

Balance

- **Definition:** Keeping both sides of an equation equal by doing the same operation on each side.
- **Math Examples:**
 - Add or subtract the same number on both sides:
 $(x + 3 = 18 \rightarrow x = 15)$.
- **Real-Life Example:** Making sure pay increases or decreases are applied fairly.
- **Fairness Example:** A balanced equation is like fair treatment — both sides get the same value.

Wage Gap

- **Definition:** The difference in pay between two people doing the same or similar work.
- **Math Examples:**
 - Worker A = \$18/hr; Worker B = \$15/hr → Gap = \$3/hr.
 - Represented as $(x + 3 = 18)$.
- **Real-Life Example:** Comparing pay between teachers and engineers, or men and women in similar jobs.
- **Fairness Example:** Solving wage-gap equations helps expose and correct unfair pay differences.

Unknown

- **Definition:** The number we don't know yet in an equation—often represented by a variable.
- **Math Examples:**
 - In $(x + 5 = 30)$, the unknown is $(x = 25)$.
 - In $(x + 4 = 22)$, the unknown is $(x = 18)$.
- **Real-Life Example:** Finding how much someone should earn to make pay equal.
- **Fairness Example:** The unknown represents the fairness we're solving for — what's missing to create equality.

Substitution

- **Definition:** Replacing a variable with its value to check that both sides of the equation are equal.
- **Math Examples:**
 - $(x = 15)$; check: $(15 + 3 = 18 \rightarrow 18 = 18)$. 
- **Real-Life Example:** Testing if the raise truly closes the wage gap.
- **Fairness Example:** Substitution confirms whether balance—and fairness—has been achieved.

Equality

- **Definition:** The state of two things being the same in value, expression, or treatment.
- **Math Examples:**
 - $(18 = 18)$ or $(x + 3 = 18)$ when solved correctly.
- **Real-Life Example:** Equal pay for equal work.
- **Fairness Example:** Equality in math models equality in life — everyone deserves the same value for the same contribution.

Inequality

- **Definition:** A math statement showing that two values are not equal, using symbols like $>$, $<$, \geq , \leq .
- **Math Examples:**
 - $(15 < 18)$ or $(x + 3 < 18)$.
- **Real-Life Example:** When one worker earns less than another for the same job.
- **Fairness Example:** Inequalities reveal gaps we must close to achieve true fairness.

Fair Pay

- **Definition:** When people are paid equally for doing the same work with the same skill and effort.
- **Math Examples:**
 - Worker A: \$18/hr, Worker B: \$15/hr \rightarrow Needs +\$3 raise for fairness.
- **Real-Life Example:** Adjusting salaries to make them equal across job sectors.
- **Fairness Example:** Fair pay supports dignity, justice, and equity in every profession.

Summary of Math + Fairness Connections

Concept	Math Focus	Fairness Connection
Equation	Keeps both sides equal	Models fairness and balance
Variable & Unknown	Represents missing value	Shows what must change to make things fair
Wage Gap	Measures pay difference	Highlights inequality that can be fixed
Balance & Equality	Equal operations both sides	Reflects justice and equal treatment
Fair Pay	Solving for fairness	Ensures all workers are valued equally