NAKABAALE MATHEMATICS	
A comprehensive list of words and phrases that can be used to describe each inequality symbol:	
Symbol	Possible words
	- Less than
	- Fewer than
	- Smaller than
	- Shorter than (in some contexts, like height)
	- Inferior to
1. Less Than (<)	- Below
	- Greater than
	- More than
	- Larger than
	- Taller than (in some contexts, like height)
	- Superior to
2. Greater Than (>)	- Above
	- Less than or equal to
	- At most
	- Not more than
	- Fewer than or equal to
3. Less Than or Equal To	- Smaller than or equal to
	- Greater than or equal to
	- At least
	- Not less than
	- More than or equal to
4. Greater Than or Equal To	- Larger than or equal to
Phrases and expressions used to describe relationships between variables in mathematics.	
	- "Twice as much as"
	- "Two times"
1. Twice as (as twice as)	- "Double"
	- "Half as much as"
	- "One half of"
2. Half as (as half as)	- "Half of"
3. More than	- "Greater by"

	- "Exceeds by"
	- "Increased by"
4. Less than	- "Smaller by"
	- "Reduced by"
	- "Decreased by"
5. Equal to	- "Is the same as"
	- "Is identical to"
	- "Matches"

6. Greater than	- "Surpasses"
	- "Exceeds"
	- "Is more than"
7. Less than	- "Falls short of"
	- "Is less than"
	- "Is below"
8. At least	- "Minimum of"
	- "No less than"
	- "Not less than"
9. At most	- "Maximum of"
	- "No more than"
	- "Not more than"
10. As much as	- "Equivalent to"
	- "The same as"
	- "As large as"
11. Greater by (a certain amount)	- "More than by"

	- "Exceeds by"
	- "Increased by"
12. Less by (a certain amount)	- "Reduced by"
	- "Decreased by"
	- "Short by"

A breakdown of how drawing and shading unwanted regions relates to solving linear programming problem

Linear Programming Basics
1. **Goal:** Linear programming is a method used to find the best solution (maximum or minimum value)
to a problem that involves making decisions, often with limitations or constraints.
2. **Graphical Method:** For problems with two variables, you can draw a graph to find the solution.

<u>Steps in the Graphical Method</u>
1. **Draw the Constraints**
- Axes: Draw the horizontal (x) and vertical (y) axes to represent your variables and label them according to variables.
- Constraints are like rules, limits or inequalities which can be drawn as a line on a graph with it's equation written on it.

Draw Full line for < equal to / > equal to (_____)	**Dotted / Dashed line for < or > (…………..)**

2. **Shade the Unwanted Regions**
- **Shading:** Color or shade this area to show where rule isn't satisfied. For example, if your constraint is (x + y > 5),
you shade below this line because that's where the rule is not satisfied.

If < shade above line	**If > shade below the line**

3. **Finding the Best Solution**
- **Vertices:** The best solution is often found at the corners (vertices) of the un shaded area.(Feasible region)
NB: *Vertices formed by intersection of a dashed line shouldn't be considered because point on that line are not part of the solution.*

- **Check Vertices:** Plug these corner points into your objective function (the formula you want to maximize or minimize)

to find which one gives the best result.