

Lesson 2.1.1: Linear Inequalities in Two Variables

Linear Inequality in Two Variables: an inequality which can be written in any one of the following forms

$Ax + By < C$ $Ax + By \leq C$

$Ax + By > C$ $Ax + By \geq C$

where A , B , and C are any real numbers.

The solution of an inequality in two variables are the ordered pairs of numbers that make the inequality true.

- Practice Exercises 2.1.1**
- A. Identify whether each ordered pair is a solution to the given inequality. Write *YES* if it is or *NO* if it is not.
1. $x + y > -1$

2. $2x - y \geq 3$

3. $3x + 2y \leq 5$
- a. $(-1, 2)$

a. $(2, 1)$

a. $(4, 2)$
- b. $(0, 0)$

b. $(2, 0)$

b. $(-\frac{1}{2}, -3)$
- c. $(-3, 2)$

c. $(\frac{1}{2}, 2)$

c. $(-5, 2)$
- B. Translate the following situations into mathematical phrases.
1. The sum of two numbers is less than 7.

2. The difference of two numbers is greater than 2.

3. Thrice a number is less than or equal to another number.

4. Nicole bought 2 earrings (e) and 3 bracelets (b) and paid not more than ₱1,000.00.

5. Twice the number of mango (m) exceeds thrice the number of guava (g).

- Activity 2.1.1**
- A. Identify whether each ordered pair is a solution to the given inequality. Write *YES* if it is or *NO* if it is not.
1. $-x - y > 1$

2. $3x - 3y \geq 2$

3. $3x + y \leq 2$
- a. $(-1, 2)$

a. $(2, 1)$

a. $(4, 2)$
- b. $(0, 0)$

b. $(2, 0)$

b. $(-\frac{1}{2}, -3)$
- c. $(-3, 2)$

c. $(\frac{2}{3}, 1)$

c. $(-5, 2)$
- B. Translate the following situations into mathematical phrases.
1. The sum of two numbers is less than 9.

2. The difference of two numbers is greater than 5.

3. Twice a number is greater than or equal to another number.

4. Nica bought 4 rings (r) and 2 dresses (d) and paid not more than ₱1,300.00.

5. To get a passing mark in school, a student must have a grade (g) of at least 75.

Lesson 2.1.1: Linear Inequalities in Two Variables

Linear Inequality in Two Variables: an inequality which can be written in any one of the following forms

$Ax + By < C$ $Ax + By \leq C$

$Ax + By > C$ $Ax + By \geq C$

where A , B , and C are any real numbers.

The solution of an inequality in two variables are the ordered pairs of numbers that make the inequality true.

- Practice Exercises 2.1.1**
- A. Identify whether each ordered pair is a solution to the given inequality. Write *YES* if it is or *NO* if it is not.
1. $x + y > -1$

2. $2x - y \geq 3$

3. $3x + 2y \leq 5$
- a. $(-1, 2)$

a. $(2, 1)$

a. $(4, 2)$
- b. $(0, 0)$

b. $(2, 0)$

b. $(-\frac{1}{2}, -3)$
- c. $(-3, 2)$

c. $(\frac{1}{2}, 2)$

c. $(-5, 2)$
- B. Translate the following situations into mathematical phrases.
1. The sum of two numbers is less than 7.

2. The difference of two numbers is greater than 2.

3. Thrice a number is less than or equal to another number.

4. Nicole bought 2 earrings (e) and 3 bracelets (b) and paid not more than ₱1,000.00.

5. Twice the number of mango (m) exceeds thrice the number of guava (g).

- Activity 2.1.1**
- A. Identify whether each ordered pair is a solution to the given inequality. Write *YES* if it is or *NO* if it is not.
1. $-x - y > 1$

2. $3x - 3y \geq 2$

3. $3x + y \leq 2$
- a. $(-1, 2)$

a. $(2, 1)$

a. $(4, 2)$
- b. $(0, 0)$

b. $(2, 0)$

b. $(-\frac{1}{2}, -3)$
- c. $(-3, 2)$

c. $(\frac{2}{3}, 1)$

c. $(-5, 2)$
- B. Translate the following situations into mathematical phrases.
1. The sum of two numbers is less than 9.

2. The difference of two numbers is greater than 5.

3. Twice a number is greater than or equal to another number.

4. Nica bought 4 rings (r) and 2 dresses (d) and paid not more than ₱1,300.00.

5. To get a passing mark in school, a student must have a grade (g) of at least 75.

Lesson 2.1.1: Linear Inequalities in Two Variables

Linear Inequality in Two Variables: an inequality which can be written in any one of the following forms

$Ax + By < C$ $Ax + By \leq C$

$Ax + By > C$ $Ax + By \geq C$

where A , B , and C are any real numbers.

The solution of an inequality in two variables are the ordered pairs of numbers that make the inequality true.

- Practice Exercises 2.1.1**
- A. Identify whether each ordered pair is a solution to the given inequality. Write *YES* if it is or *NO* if it is not.
1. $x + y > -1$

2. $2x - y \geq 3$

3. $3x + 2y \leq 5$
- a. $(-1, 2)$

a. $(2, 1)$

a. $(4, 2)$
- b. $(0, 0)$

b. $(2, 0)$

b. $(-\frac{1}{2}, -3)$
- c. $(-3, 2)$

c. $(\frac{1}{2}, 2)$

c. $(-5, 2)$
- B. Translate the following situations into mathematical phrases.
1. The sum of two numbers is less than 7.

2. The difference of two numbers is greater than 2.

3. Thrice a number is less than or equal to another number.

4. Nicole bought 2 earrings (e) and 3 bracelets (b) and paid not more than ₱1,000.00.

5. Twice the number of mango (m) exceeds thrice the number of guava (g).

- Activity 2.1.1**
- A. Identify whether each ordered pair is a solution to the given inequality. Write *YES* if it is or *NO* if it is not.
1. $-x - y > 1$

2. $3x - 3y \geq 2$

3. $3x + y \leq 2$
- a. $(-1, 2)$

a. $(2, 1)$

a. $(4, 2)$
- b. $(0, 0)$

b. $(2, 0)$

b. $(-\frac{1}{2}, -3)$
- c. $(-3, 2)$

c. $(\frac{2}{3}, 1)$

c. $(-5, 2)$
- B. Translate the following situations into mathematical phrases.
1. The sum of two numbers is less than 9.

2. The difference of two numbers is greater than 5.

3. Twice a number is greater than or equal to another number.

4. Nica bought 4 rings (r) and 2 dresses (d) and paid not more than ₱1,300.00.

5. To get a passing mark in school, a student must have a grade (g) of at least 75.

Lesson 2.1.1: Linear Inequalities in Two Variables

Linear Inequality in Two Variables: an inequality which can be written in any one of the following forms

$Ax + By < C$ $Ax + By \leq C$

$Ax + By > C$ $Ax + By \geq C$

where A , B , and C are any real numbers.

The solution of an inequality in two variables are the ordered pairs of numbers that make the inequality true.

- Practice Exercises 2.1.1**
- A. Identify whether each ordered pair is a solution to the given inequality. Write *YES* if it is or *NO* if it is not.
1. $x + y > -1$

2. $2x - y \geq 3$

3. $3x + 2y \leq 5$
- a. $(-1, 2)$

a. $(2, 1)$

a. $(4, 2)$
- b. $(0, 0)$

b. $(2, 0)$

b. $(-\frac{1}{2}, -3)$
- c. $(-3, 2)$

c. $(\frac{1}{2}, 2)$

c. $(-5, 2)$
- B. Translate the following situations into mathematical phrases.
1. The sum of two numbers is less than 7.

2. The difference of two numbers is greater than 2.

3. Thrice a number is less than or equal to another number.

4. Nicole bought 2 earrings (e) and 3 bracelets (b) and paid not more than ₱1,000.00.

5. Twice the number of mango (m) exceeds thrice the number of guava (g).

- Activity 2.1.1**
- A. Identify whether each ordered pair is a solution to the given inequality. Write *YES* if it is or *NO* if it is not.
1. $-x - y > 1$

2. $3x - 3y \geq 2$

3. $3x + y \leq 2$
- a. $(-1, 2)$

a. $(2, 1)$

a. $(4, 2)$
- b. $(0, 0)$

b. $(2, 0)$

b. $(-\frac{1}{2}, -3)$
- c. $(-3, 2)$

c. $(\frac{2}{3}, 1)$

c. $(-5, 2)$
- B. Translate the following situations into mathematical phrases.
1. The sum of two numbers is less than 9.

2. The difference of two numbers is greater than 5.

3. Twice a number is greater than or equal to another number.

4. Nica bought 4 rings (r) and 2 dresses (d) and paid not more than ₱1,300.00.

5. To get a passing mark in school, a student must have a grade (g) of at least 75.