POPULATION IN RATIO FORM

Subject

Mathematics

Prepared By

[Instructor Name]

Grade Level

5

Overview

This lesson plan covers teaching content for;

1. Expressing two population in ratio

Objectives

Students should be able to;

1. Express two populations in ratio.

Activity Starter/Instruction

1. A population ratio shows the relationship of one population subgroup to another or a subgroup to the entire population.
2. Determine the size of the first population group. For example, assume there are 10,000 people from Asian in the total population.
3. Determine the size of the second population group. For example, assume there are 20,000 people from Hispanic in the total population.
4. Divide the Hispanic population, 20,000, by the Asian population, 10,000, to find the ratio of Hispanic to Asian: 20,000 divided by 10,000 is 2 to 1 -- there are two Hispanic people to every Asian.

Guided Practice

Day 2/ Lesson 2: 15 Mins

1. City A has a population of 420,000 people and 200 Managing Directors (MD). City B has a population of 460,000 people and 230 Managing Directors. Which city has a higher ratio MD to number of people?
2. Ratio of MDs to number of people in city

Teacher Guide

Day 1/ Lesson 1: 15 Mins

1. Ask students to write the number of boys and girls in their family. Teacher uses his/her family as an example on the board.

2. There are 6 boys and 4 girls in teachers' family. What is the ratio of a) Boys to girls?
   b) Girls to boys?
   c) Boys to the total?
   d) Girls to the total?

3. The ratio of boys to girls is

As a fraction: boys / girls = 6/4

This may be simplified by dividing both numerator and denominator by 2.

6/ 4 = (6÷2) / (4÷2) = 3/2

It can also be written as:

Fraction: 3/2, 4:3 or "4 to 3".

The ratio of girls to boys is

As a fraction: girls / boys = 4/6 = 2/3, 2:3, 2 to 3.

4. **The total of children in the family**

Materials Required

-White Board

-Marker

-Cards

Additional Resources

- https://www.oercommons.org/courseware/lesson/18
- https://www.pbs.org/wgbh/nova/teachers/activities/
- https://www.manhattanprep.com/gmat/blog/part-to-
- http://www.columbia.edu/itc/hs/pubhealth/modules,
- https://socratic.org/questions/if-the-ratio-of-boys-to-students-in-a-class-how-do
-

Additional Notes

A;

Ratio city A: 420,000 / 200

Divide numerator 420,000 and denominator 200 by 200.

Ratio: 2100 / 1   or 2100 to 1   or 2100:1

3. Ratio of MDs to number of people in city B;

Ratio city B: 460,000 / 230

Divide numerator 460,000 and denominator 230 by 230.

Ratio city B: 2000 / 1   or 2000 to 1   or 2000:1

4. City A has a higher ratio of MDs to number of people.

total = boys + girls = 6 + 4 = 10

The ratio of boys to the total

Ratio as a fraction: boys / total = 6/10 = 3/5, 3:5, 3 to 5.

The ratio of girls to the total

Ratio as a fraction: girls / total = 4/10 = 2/5, 2:5, 2 to 5.

5. Ask pupils to do the same for the numbers written in their book.

Guided Practice

Day 3/ Lesson 3: 20mins

1. Challenge: Pupils will use two cards to form a fraction, and then compare to see who has the larger fraction. If they are equivalent, repeat until someone wins the round.

2. For a twist on the traditional card game War, assign values of 1 to the ace, 11 to the jack, 12 to the queen, and 13 to the king (limit the game to number cards only).

3. Playing in pairs, each student lays two cards face up, and then subtracts the lower number from the higher number.

4. Whoever has the higher answer wins all four cards. If the totals are the same, the players flip over two more cards and repeat until there is a winner.

Assessment Activity

Ask students questions to assess and deepen their understanding of expressing in ratio.

Summary

Ask for volunteers to share their answers to the problems assigned

Assessment Activity

Assess if pupils can:

1. Express population in ratio