

# DIRECT PROPORTION

## Subject

Mathematics

## Prepared By

[Instructor Name]

## Grade Level

5

## Overview

This lesson plan covers teaching content for;

1. Understanding proportionality when the relations between quantities are in the same ratio.

## Objectives

Students should be able to;

1. Understand proportionality when the relations between quantities are the same.

## Activity Starter/Instruction

1. Directly proportional: as one amount increases, another amount increases at the same rate.
2. The symbol for "directly proportional" is  $\propto$
3. For example: you are paid \$20 an hour. How much you earn is **directly proportional** to how many hours you work. Work more hours, get more pay; in direct proportion.
4. This could be written as:  
Earnings  $\propto$  Hours worked.  
If you work 2 hours you get paid \$40  
If you work 3 hours you get paid \$60

## Guided Practice

### Day 2/ Lesson 2: 20Mins

1. Ask pupils to bring the wrappers of their favorite sweet to class.
2. Have students draw grid lines over the wrappers by tapping the wrappers to the grid paper and continuing the lines over them.
3. Explain to students that they will be drawing bigger versions of the wrappers using

## Teacher Guide

### Day 1/ Lesson 1: 15mins

1. For this activity, have each of the pupils bring a toy or stuffed animal to class. What would the adorable dolls look like if they were the same height as a school student? Would they still be as adorable?
2. Have pupils measure the heights of their toys, as well as their own heights. Have them find out how much more bigger than the toy they are.
3. Ask the pupils to measure the length of important body parts of the toy like the face, the arms, the legs, the torso, etc. Ask the pupils to measure the breadth of important body parts of the toy where necessary.
4. Have the students use proportions to figure out how long and wide each body part would be if the toys were as tall as the students are.

## Materials Required

- Toy or stuffed animal
- Measuring tape
- Wrapper of sweet
- Drawing book
- White board
- Marker

## Additional Resources

- <https://aminghori.blogspot.com/2017/03/lesson-plan>
- <https://classroom.synonym.com/hands-on-activities-r>
- <http://www.kwiznet.com/p/takeQuiz.php?ChapterID=>
- <https://betterlesson.com/community/lesson/555764/>
- <http://www.moomoomath.com/direct-variation-inver>
- <https://teachers.net/lessons/posts/4201.html>
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## Additional Notes

	<p>proportions. Let pupils decide how much larger than the original their drawing will be.</p> <p>4. Explain that if their drawing is going to be seven times larger than the original, they must equate the length of one square with the length of seven squares, and the height of one squares with the height of seven squares.</p> <p>Have students get to work on their drawing. Display the finished products where everyone can see it</p>	<p><b>Guided Practice</b></p> <p><b>Day 3/ Lesson 3: 15mins</b></p> <ol style="list-style-type: none"> <li>Today we are going to go on a school excursion and we need to make sandwiches for the whole class. If we need 2 loaves of bread to make sandwiches for my 4 siblings, how many loaves of bread will we need in order to make sandwiches for all 24 students in the class?</li> <li> <math display="block">4 \text{ sandwiches} - 2 \text{ loaves} \quad a - b</math> <math display="block">24 \text{ sandwiches} - x \text{ loaves} \quad c - x</math> <math display="block">X = \frac{bc}{A} \Rightarrow \frac{2 \times 24}{4} = 12 \text{ loaves}</math> </li> <li>We will need 12 loaves of bread to make sandwiches for 24 students. As one quantity (number of people) increases, the other (number of loaves) increases in the same proportion.</li> </ol>
	<p><b>Assessment Activity</b></p> <p>Pupils need to be familiar with direct proportion and how to solve related questions.</p>	<p><b>Assessment Activity</b></p> <p>Assess if students can</p> <ol style="list-style-type: none"> <li>Solve for direct proportion.</li> </ol>
	<p><b>Summary</b></p> <ol style="list-style-type: none"> <li>Ask for volunteers to share their answers to the tasks carried out.</li> <li>As the practices are reviewed in front of the class, have the students check their answers for accuracy</li> </ol>	
