**Ratio**

* comparison of **different categories** of the **same thing (same units**)
* can write **it in words (*apples to oranges***) or with a **colon (*3:4*)**

**Two-term ratio** – compares **2 different** categories with the **same units.** Ex. Blue marbles to green marbles

-can also write two term ratios as a **fraction,** or **percent**

**Three-term ratio** – compares **3 different** categories with the **same units**. Ex. Blue : red : green marbles

**Part to part ratio**- compares **parts of the group** to **other parts** of the same group. Ex. Blue marbles to green marbles in the same bag.

**Part to whole ratio** – compares different parts of the group to the whole group Ex. Blue marbles : total marbles.

**Simplifying ratios**

– just like simplifying a fraction, you need to find a number that you can

divide **all** of the ratios by evenly. (a common multiple)

*Ex.* 40/ 50 = divide both by 10 = 4/5

18 : 15 = divide both by 3 = 6/5

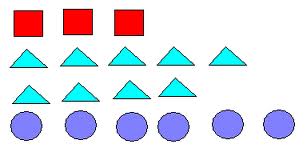
14 to 28 to 35 = divide all by 7 = 2 to 4 to 5

**Ratio activities:**

1. Write 3 different ratios from the picture to the left. Write each ratio

in 2 different ways.

* 1. Two-term, part to part -

[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=ZA1pNPBnu0JHHM&tbnid=IZTkfvLGBVgzdM:&ved=0CAUQjRw&url=http://www.analyzemath.com/primary_math/grade_5/ratio.html&ei=G7K0UqzbGePb2AW45YCIDg&bvm=bv.58187178,d.aWc&psig=AFQjCNFZodRgDafZM2ydUaLZUXUxoid95g&ust=1387660038954049)

* 1. Three-term, part to part -
  2. Two-term, part to whole -

1. Simplify the ratios above (if needed).
2. Draw your own picture and have a classmate find the ratios in it.

**Rate**

* Compares things that have **different units**
* Usually one of the units is a **measurement unit** (distance, time, cost, etc).
* Can **write as a fraction** that includes different units, but **NOT as a percent** (because of the different units)
* Can write a **unit rate or unit price as a decimal** also, because the fraction would be over one

**Unit rate** – a rate where the **second term is one** . (***PER or EACH*** are clue words)

Ex. 60 beats **in one** minute, 5 passengers **to a** car, 6 classes **per** day, 2 pencils **for each** student.

**Unit price** – like unit rate, but dealing with cost or money

* the **price for one item** or **cost of one unit of an item**.

Ex. $1.13 per can drink, $0.02 cents per ml, $.60 per gram

**Proportion**

* Two ratios that are equal
* Can solve these problems in 2 ways :
  + - find the unit rate, then multiply
    - Find out what number was multiplied to find one of the terms, and multiply the other term by that number.

**Review for test – P. 70-71, p 72-73**

**Project *– Wrap it up* pg. 73**

* **Plan a meal that will serve ten people. Include at least one dish from each of the following categories:** 
  + **Soup, salad, appetizer**
  + **Main course**
  + **Dessert**
* **Create your meal plan.**

1. Create an **invitation to the meal**, and include a **logo with an area of 36 cm2**, and uses the following **color ratios 4:3, and 2:3:4**
2. Record your three recipes, and beside each write the amount of each ingredient you would need to feed 10 people (shopping list).
3. Justify your calculations for ONE of the three recipes (*show all work!)*
4. Calculate the total cost of serving one of your dishes to your guests – using prices from an online grocery site. Show your work – and include a bibliography for your web resources.