حل تدريبات الدرس الأول من الوحدة الأولى

التواصل الاجتماعي بحسب الصف السادس

روابط مواد الصف السادس على تلغرام

الرياضيات	اللغة الانجليزية	اللغة العربية	التربية الاسلامية

المزيد من الملفات بحسب الصف السادس والمادة رياضيات في الفصل الأول

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Ratio

$$3 \text{ To } 10 \quad , \quad \frac{3}{10} \quad , \quad 3 : 10$$

cups
• lemon	2
• Syrup	1
• water	7

$$2 + 1 + 7 = \boxed{Total} = 10$$

Ratio lemon $= \frac{2}{10} = \frac{2}{2 \cdot 5}$

$$= \boxed{\frac{1}{5}}$$

Example 1 Understand Ratios

Pedro mixed two sample containers of blue paint with three sample containers of yellow paint to create his favorite shade of green paint. Pedro realized he did not have enough paint, so he added two more sample containers of each color.

Will the new mixture result in the same shade of green? Justify your response.

blue + 5

Yellow

3

added 2 more blue + 2 more yellow

4 blue + 5 yellow

blue 2 to 3 yellow

blue 4 : 5

$\frac{2}{3} \longrightarrow$

Not enough.

Learn Part-to-Whole and Part-to-Part Ratios

Total

A **part-to-whole ratio** compares one part of a group to the whole group. The ratio 2 : 10 is a part-to-whole ratio because it compares the number of cups of lemon juice (the part) to the total number of cups of lemonade (the whole).

Ingredient	Number of Cups
Lemon Juice	2
Simple Syrup	1
Water	7

whole
$2 + 1 + 7 = 10$

$\dfrac{2}{10}$ → part
→ whole

$\dfrac{1}{10}$

$\dfrac{7}{10}$

Model

2 cups of lemon juice

← part

← whole

-------- 10 total cups of lemonade --------

Words	Ratio Notation
For every 2 cups of lemon juice, there are 10 total cups of lemonade.	part → 2 to 10 ← whole part → 2 : 10 ← whole part → $\dfrac{2}{10}$ ← whole

: 10

over / to

A **part-to-part ratio** compares one part of a group to another part of the same group. The ratio 2 : 7 is a part-to-part ratio because it compares the number of cups of lemon juice (one part) to the number of cups of water (another part) needed to make the lemonade.

$$\dfrac{2}{7} = 2 : 7 =$$

Example 2 Part-to-Whole Ratios

A florist is arranging flowers in vases to sell to her customers. She has two sizes of vases available: small and large. She wants the large vase to have the same ratio of flowers as the small vase.

If the large vase has a total of 36 flowers, how many are tulips?

Small Vase	
Flower	Quantity
Carnations	6
Sunflowers	2
Tulips .	4 .

$$\text{whole} = \text{Total} = 6 + 2 + 4 = \boxed{12}$$

$$\frac{\text{part}}{\text{whole}} \quad \frac{4}{12} = \frac{4}{4 \times 3} = \boxed{\frac{1}{3}}$$

every one of Tulipe has 3 flowers

$$\frac{1}{3} \times 36 = \frac{36}{3} = \boxed{12}$$

🌐 Example 3 Part-to-Part Ratios

- A bakery sells fresh-baked muffins, sold in small or large boxes. The manager of the bakery wants to maintain the same ratio of each type of muffin in the large box as in the small box.

- **If the large box contains 9 chocolate muffins, how many blueberry muffins are in the large box?**

Small Box	
Muffin	**Quantity**
Blueberry	2
Cinnamon	1
Chocolate	3

$$\frac{blueberry}{chocolate} = \frac{2}{3}$$

$$\frac{2}{3} \times 9 = \frac{2 \times 9}{3} = \frac{18}{3}$$

$$= 6$$

Practice

1. In Suri's coin purse, she has 6 dimes and 4 quarters. Martha has 5 dimes and 3 quarters. Suri thinks that the ratio of dimes to quarters in both purses is the same because they each have 2 more quarters than dimes. Is the same ratio of dimes to quarters maintained? Justify your response.
(Example 1)

$$\frac{D}{6}, \frac{Q}{4}$$

$$\frac{D}{5}, \frac{Q}{3}$$

Suri's ratio $\frac{6}{4}$

Martha's ratio $\frac{5}{3}$

$$\frac{dimes}{quarters}$$

$$\frac{6}{4} = \frac{2 \times 3}{2 \times 2} \quad \boxed{\frac{3}{2}} \quad \boxed{\frac{5}{3}}$$

Not Same

3. Riley needs to make fruit punch for the family reunion. One batch of punch has the ingredients shown. If the punch bowl holds 27 cups, how many cups of orange juice will she need to keep the ratio in a full punch bowl the same? (Example 2)

Item	Cups
Cranberry Juice	4
Lemon Lime Soda	1
Orange Juice	2
Pineapple Juice	2

how many كم عدد

Part - to - whole

whole = 4 + 1 + 2 + 2
= 9

$$\frac{orang\ Juice}{whole} = \frac{2}{9}$$

$$\frac{2}{9} \times 27 = \frac{2 \times 3 \times 9}{9}$$

$$2 \times 3 = 6$$

4. A small fruit basket contains the fruits shown. A large basket has the same ratio of fruits as the small basket. If the large basket has 42 total pieces of fruit, how many are pears? (Example 2)

Small

Type of Fruit	Amount
Apple	6
Orange	5
Pear	3

$$\frac{ratio}{Small} = \frac{ratio}{Large}$$

$$6+5+3 = 14$$

$$42$$

$$\frac{Pear}{whole} = \frac{3}{14} \rightarrow \frac{3}{14} \times 42$$

$$\frac{3 \times 6 \times 7}{2 \times 7} = \frac{3 \times 2 \times 3}{2} = 9$$

5. Mrs. Santiago is buying doughnuts for her office. Each box contains 6 glazed, 4 cream filled, and 2 chocolate flavored doughnuts. If there were 20 total cream filled doughnuts, how many chocolate doughnuts did she buy? (Example 3)

6
glazed

$$\frac{box}{4}$$

Cream

2
chocolate

$$\frac{20}{4} =$$

20 cream
5 box

$$5 \times 2 = 10$$
chocolate