

Name: _____

Unit 1 – Numeracy Skills

1.4 – Ratios & Proportions

A **RATIO** is a comparison of two numbers or quantities. For example:

Description	Ratio
3 dollars for 8 apples.	
40 kilometers per 1 hour.	
15 girls versus 14 boys.	
569 words in 2 minutes.	
23 green balls to 41 blue balls.	

A **RATIO** can be written in three ways:

Fraction $\frac{9}{30}$ **Words** "9 to 30" **Colon** 9 : 30

Since ratios are like fractions, ratios can be **SIMPLIFIED** like fractions:

Example: Simplify: 9 : 30 *Write as a fraction first:*

What number will divide exactly into 9 **AND** 30?

The simplified ratio is said to be **EQUIVALENT** to the original ratio:

$$9 : 30 = \quad \quad \quad \text{or} \quad \frac{9}{30} =$$

So, we can say that 9 : 30 is an **EQUIVALENT RATIO** to

RATIOS that are **EQUAL** to each other are called _____.

→ Can you write an example of a PROPORTION??:

Which of the following can be called a **PROPORTION**? (*Hint: are the ratios EQUIVALENT?*)

1. $\frac{2}{3} = \frac{14}{21}$ **Method 1:**

Method 2:

2. $\frac{45}{36} = \frac{5}{4}$

3. $4:5 = 45:36$

4. $7:9 = 28:27$

5. $17:19 = 51:57$

6. $37:29 = 74:60$

7. $\frac{5}{19} = \frac{25}{95}$

8. $6:12 = 20:35$

9. $13:9 = 39:27$

10. $\frac{17}{19} = \frac{26}{37}$

11. $63:24 = 21:8$

12. $8:18 = 2:4.5$

13. $\frac{1.5}{2.5} = \frac{7.5}{12.5}$