

COMPARING MEASUREMENTS

UNIT: UKULELE

OBJECTIVE:

Students will compare ukulele measurements using division, ratios, and unit rates to understand how measurements relate to one another.

MATERIALS:

- ✓ Ukulele
- ✓ Vernier Caliper
- ✓ Pencil

ACTIVITY SETUP:

Students will read each word problem and use the given measurements to solve.

STUDENT DIRECTIONS:

Read each word problem carefully.

Show your work and write a complete answer sentence.

1. Divide the ukulele part to know how many fit.

The ukulele bridge slot is **1.20 mm** wide.

A ukulele string has a diameter of **0.30 mm**.

How many string diameters fit into the bridge slot?

Show your solution:

Write the division sentence:

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Answer sentence: A total of _____ string diameters fit into the bridge slot.

2. Write the ratio.

A ukulele string has a diameter of **0.40 mm**.
The bridge slot width is **1.60 mm**.

Write the ratio:

String diameter: Bridge slot width

_____ : _____

Simplify the ratio. Show your solution.

Simplified ratio: _____ : _____

3. Compare two ukulele parts.

Use your **Vernier caliper** to measure the following ukulele parts:

- Nut slot width
- String diameter

Record your measurements in millimeters (mm).

Nut slot width: _____ mm

String diameter: _____ mm

Write the ratio:

Nut slot: String diameter

_____ : _____

Simplify the ratio. Show your solution.

Simplified ratio: _____ : _____

4. Find the Unit Rate

A ukulele needs 1,400 millimeters of string to make all 4 strings.

What is the unit rate in millimeters per 1 string?

Show your solution:

Unit rate:

_____ millimeters per 1 string