

Tool Match Up

Choose a tool, read its scale and measure real objects.

GRADE 3 • MA.3.M.1.1

MA.3.M.1.1 "Select and use appropriate tools to measure the length of an object, the volume of liquid within a beaker and temperature."

NAME _____

DATE _____

READ, REASON AND EXPLAIN

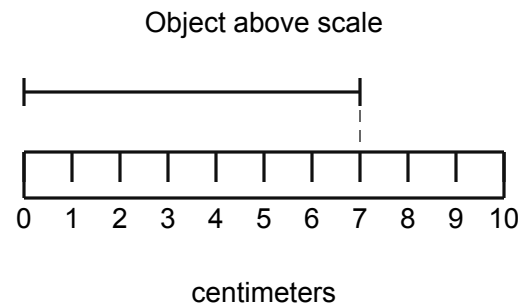
Rulers and tape measures measure length. Graduated beakers measure liquid volume. Thermometers measure temperature. Count equal scale intervals and include the unit. The printed tool drawings are enlarged scale examples; use real tools for the measurement tasks.

WORKED EXAMPLE

Read the illustrated ruler. How long is the object to the nearest centimeter?

1. The object begins at 0.
2. Each interval is 1 centimeter.
3. The other end lines up with 7.

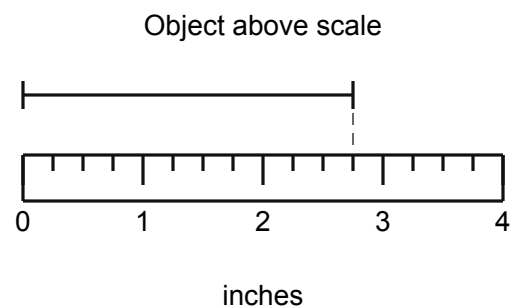
Answer: 7 centimeters.



PRACTICE 4 problems

- 1** This inch scale has 4 equal intervals in each inch.
Read the object length to the nearest quarter inch.

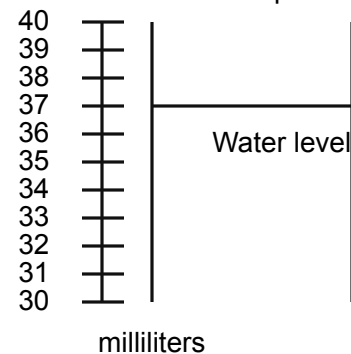
ANSWER _____



- 2** Read the beaker scale close-up. Each small interval is 1 milliliter. What volume is shown?

ANSWER _____

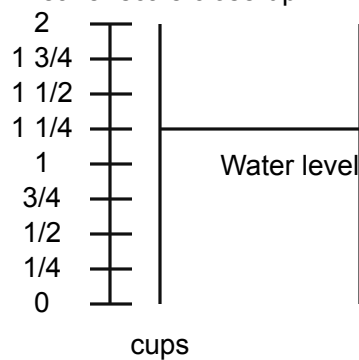
Beaker scale close-up



- 3** Read the beaker scale close-up to the nearest quarter cup. What volume is shown?

ANSWER _____

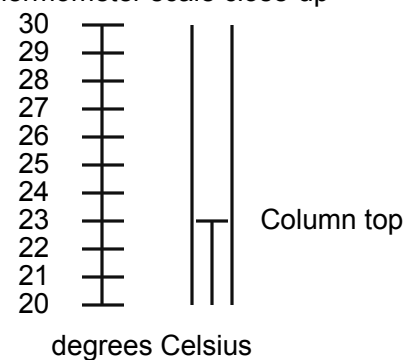
Beaker scale close-up



- 4** Read the thermometer scale close-up. Each interval is 1 degree Celsius. What temperature is shown?

ANSWER _____

Thermometer scale close-up



APPLY IT Show your work

- 1** Choose a ruler or tape measure. Measure an actual pencil from end to end. Record its length to the nearest centimeter, then to the nearest quarter inch. Name your tool.

- 2** Choose the correct tool to measure liquid volume. Use the classroom beaker containing water. Read at eye level and record its volume to the nearest milliliter. Name the tool.

CHALLENGE One step up

Choose a tool to measure classroom air temperature. Wait for its reading to settle. Record the temperature to the nearest degree and say whether the scale is Celsius or Fahrenheit. Explain why a ruler cannot do this job.

Provide pencils, rulers with centimeter and quarter-inch marks, a graduated beaker marked in milliliters containing room-temperature water, and a classroom thermometer. Demonstrate safe handling and eye-level reading. Students must take actual measurements; do not substitute invented readings. The illustrated close-ups show only part of a scale. Judge real measurements using the available tool and requested precision.

PRACTICE 1**2 3/4 inches.****PRACTICE 2****37 milliliters.****PRACTICE 3****1 1/4 cups.****PRACTICE 4****23 degrees Celsius.****APPLY IT 1**

Answers vary: correct length tool and two measured lengths with centimeters and inches. Check that the student starts at zero, reads the scale, rounds to the requested increment and includes both units.

APPLY IT 2

A graduated beaker; volume varies and must be recorded in milliliters. Check the actual water level against the beaker graduations; read the bottom of the water meniscus.

CHALLENGE

A thermometer; actual reading varies. Include degrees Celsius or degrees Fahrenheit. A ruler measures length, not temperature.