Exploring Decimals on Measuring Scales

Overview

Being able to read mixed numbers with decimals on a measuring scale is an important numeracy skill. In fact it is one of the most important reasons that many students need to understand decimals. This activity presents an opportunity to explore decimal representations in relation to measuring scales. The activity is a valuable follow up to *'Exploring Decimals as Tenths Parts 1 and 2'*. It's progressive stages may need to spread over several sessions.

Skills and Knowledge

- Meaning of decimal place value
- Representing decimals as tenths on measuring scales
- Reading decimal measuring scales

Preparation and Materials

For simple scales in tenths

- Tape measures with tenths markings (1 per pair or small group of students) (optional)
- Make several copies of Activity Sheets 1, 2 (1 per pair or small group of students). Or create images that can be projected using an OHT or PPT slide
- Make another copy of Activity Sheet 1 or 2 and on them mark arrows to indicate a series of measurements. For example:
    - On Activity Sheet 1 mark numbers such as 0.2, 0.5, 0.7.
    - On Activity Sheet 2 mark numbers such as, 1.3, 1.5 on the first diagram, 2.7, 2.1 on the second, etc.

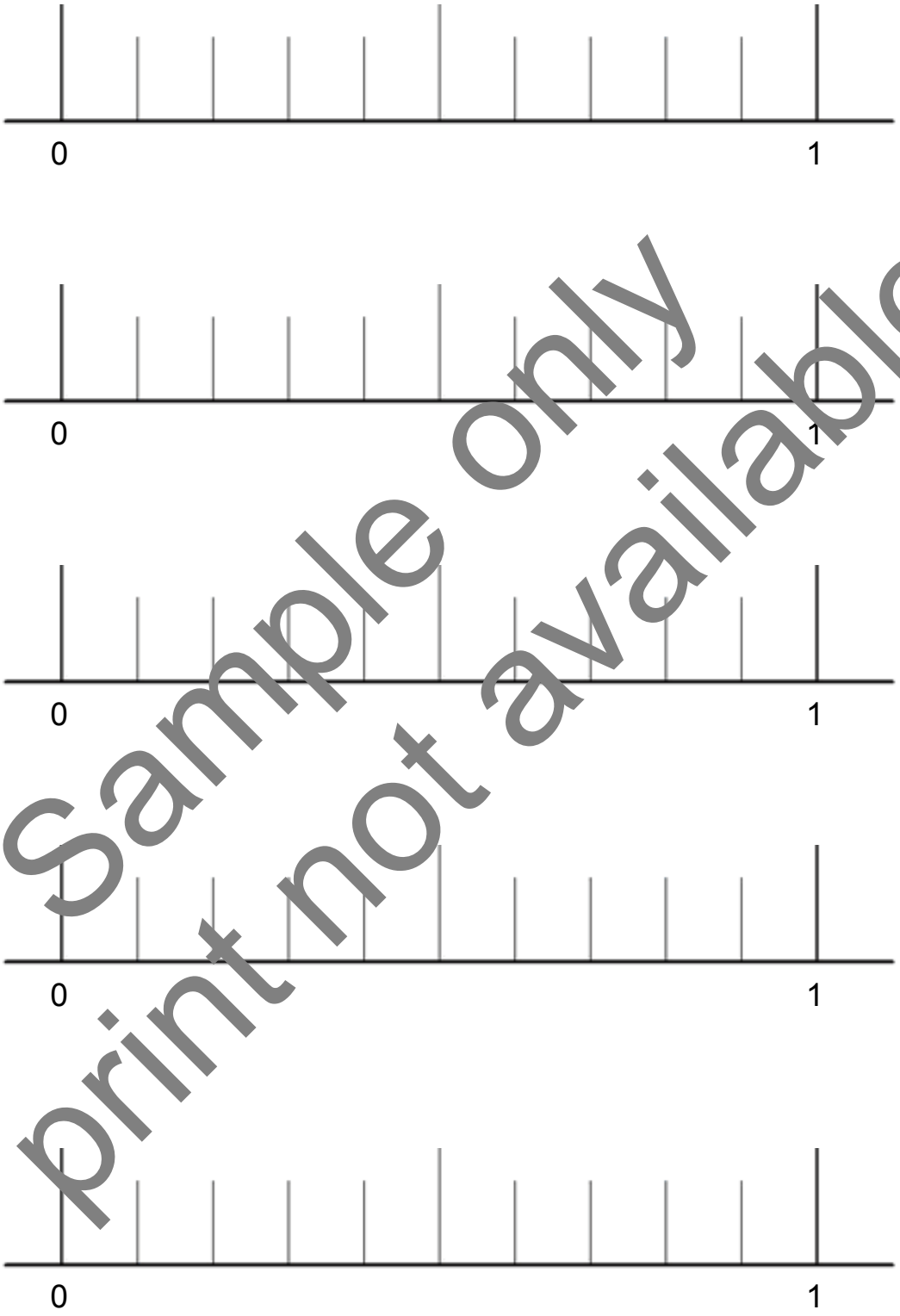
  Then photocopy each prepared sheet (1 per pair or small group of students.)
- Activity Sheet 3 is a template for creating further Practice Sheets by adding appropriate scale markings and arrows as needed.
- Photocopy Practice Sheets 1, 2 & 3 (1 per student)

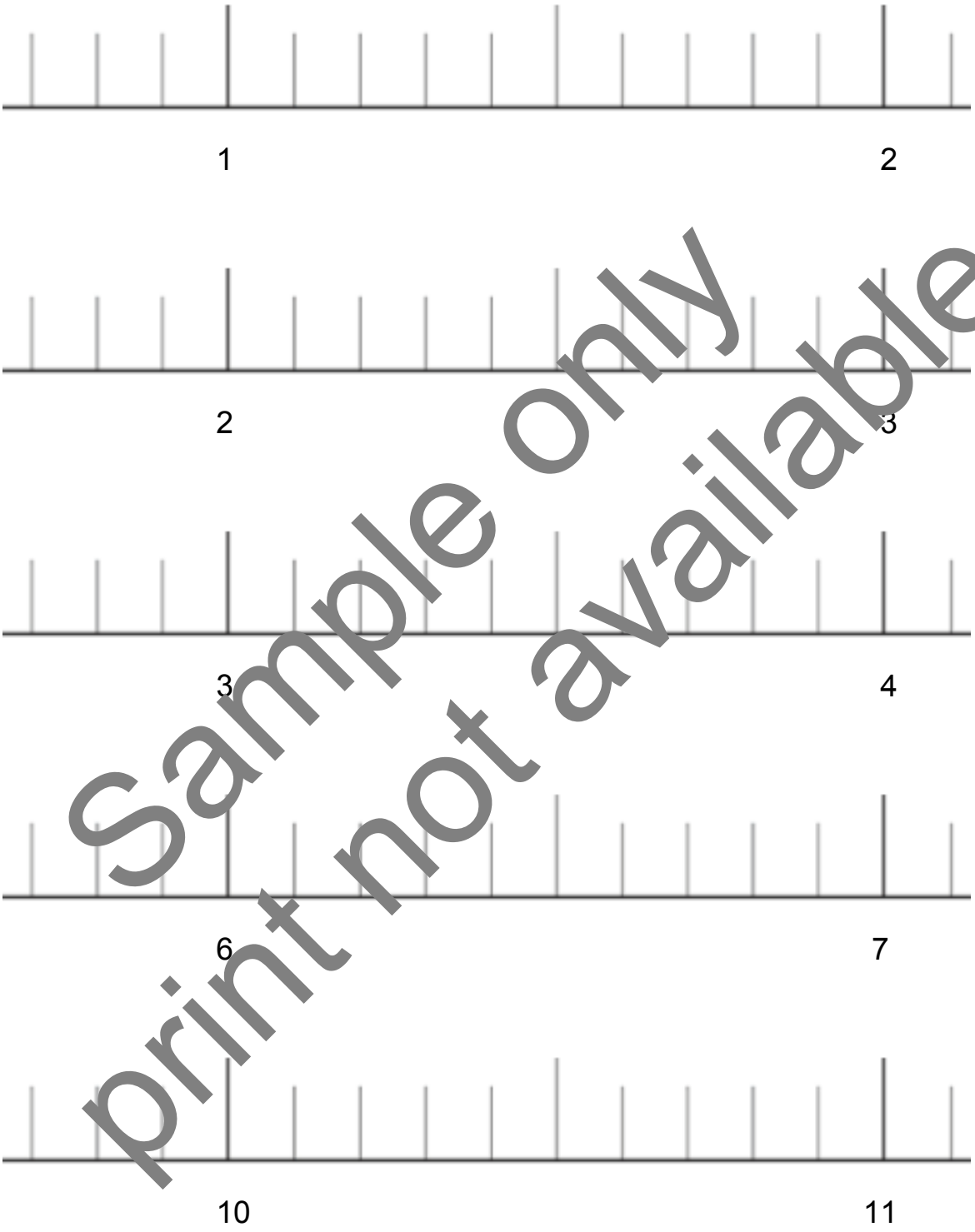
For extending to other tenth scales

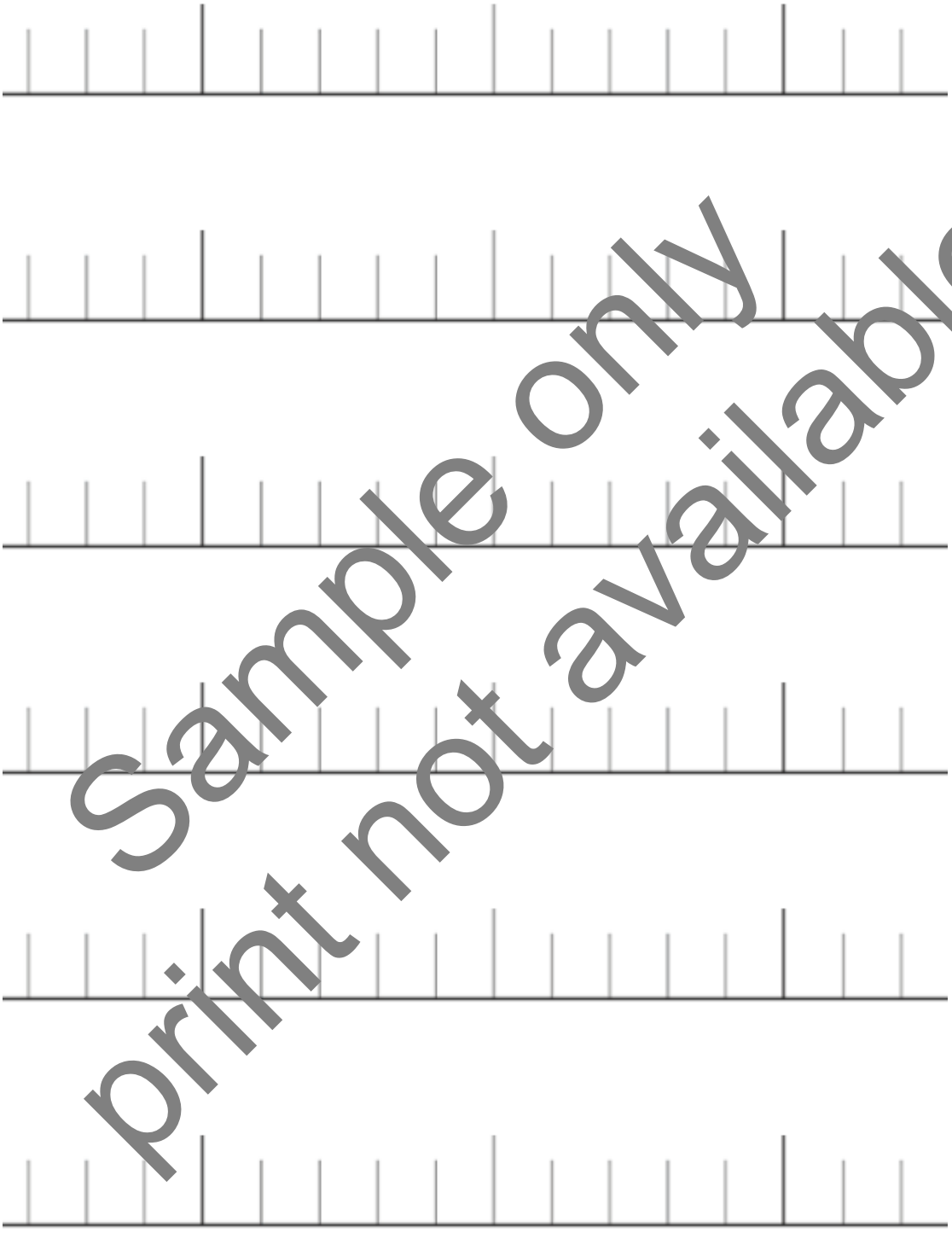
- Make copies of Activity Sheets 4 as above, and one copy with arrows marking a series of measurements on the diagrams.

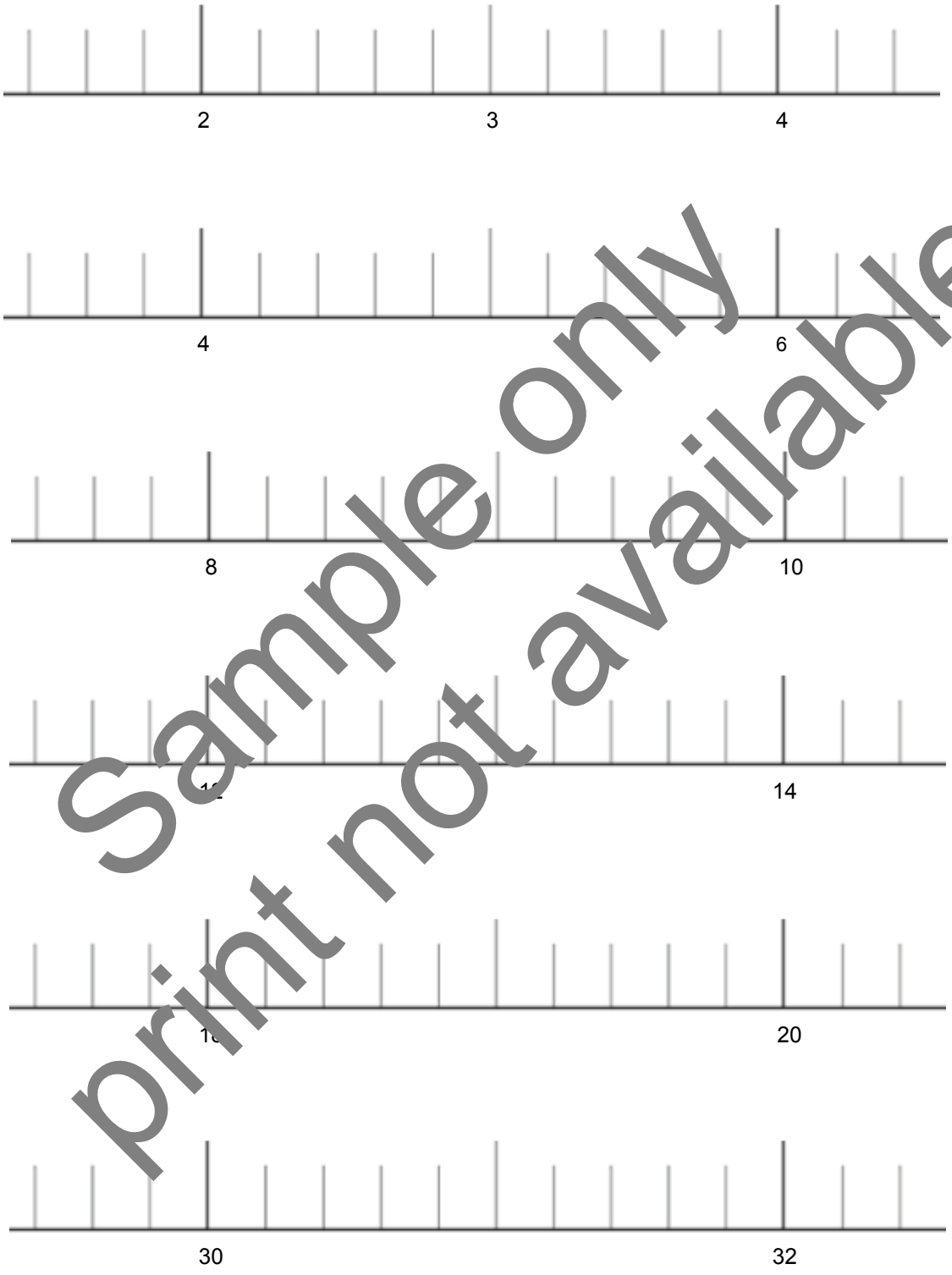
For extending to scales in hundredths

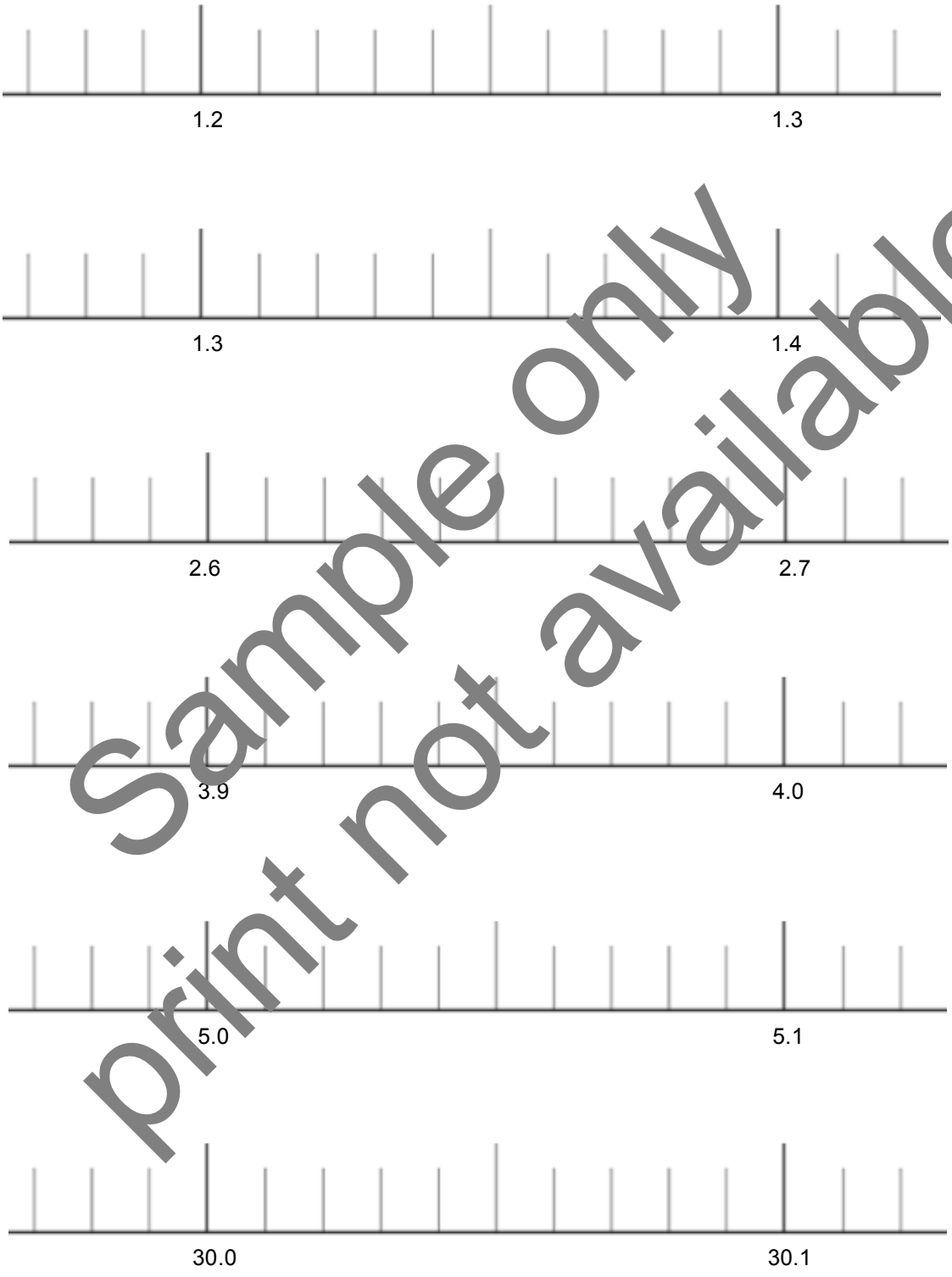
- Make copies of Activity Sheets 5 as above, and one copy with arrows marking a series of measurements on the diagrams.







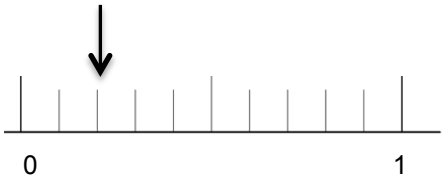




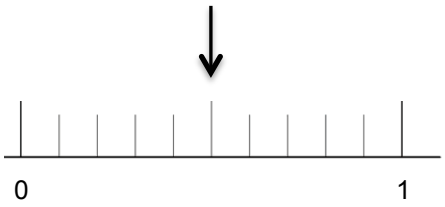
Exploring decimals on measuring scales

Practice Sheet 1

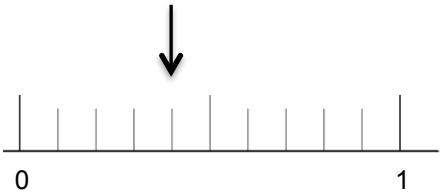
1. What measurement is marked with the arrows?



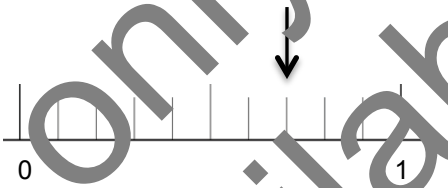
0.____ = $\frac{\quad}{10}$



0.____ = $\frac{\quad}{10}$



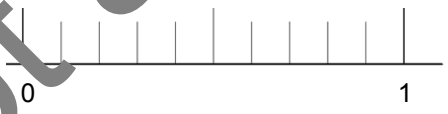
0.____ = $\frac{\quad}{10}$



0.____ = $\frac{\quad}{10}$

2. Mark these numbers on the measuring scale

0.3 = $\frac{\quad}{10}$

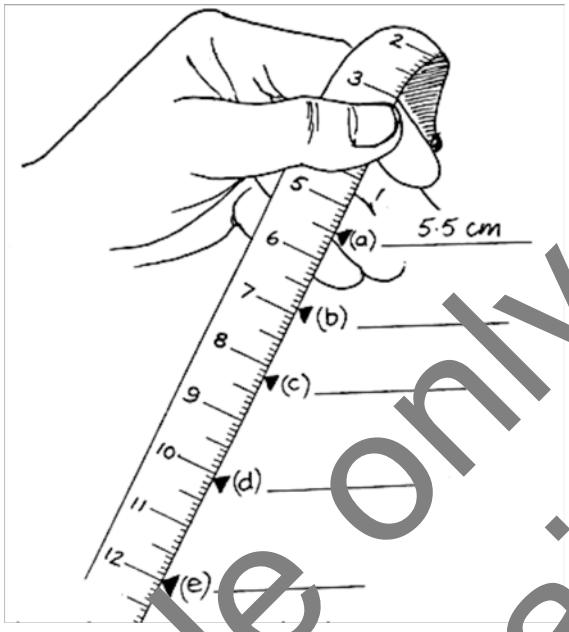


0. = $\frac{6}{10}$

0.8 = $\frac{\quad}{10}$

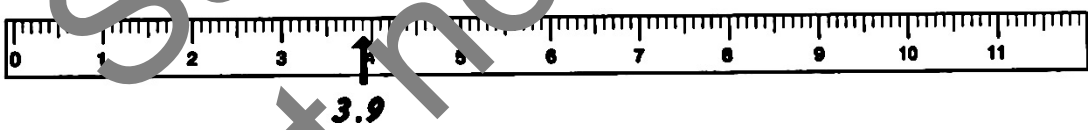
0.____ = $\frac{1}{10}$

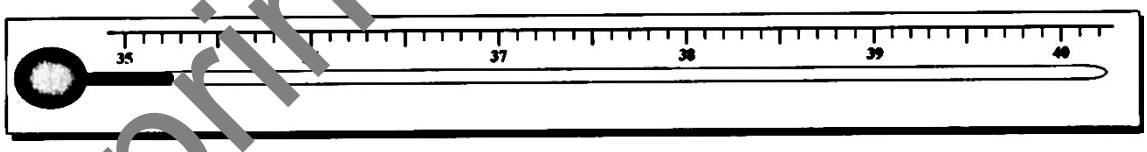
3. What are the measurements marked with arrows on this picture?

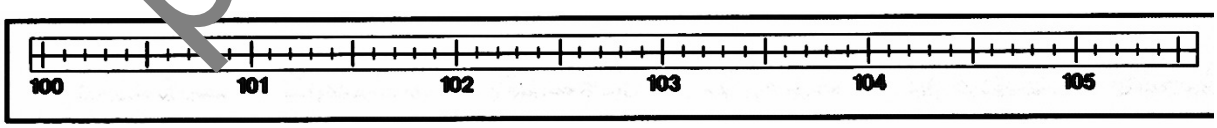


4. Mark these numbers on the scales. 3.9 is done as an example.

38.7 7.6 101.2 10.1
39.9 104.5 8.4 100.8

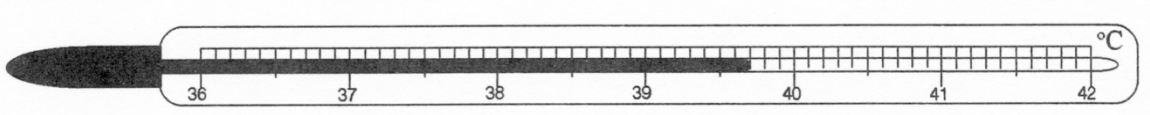






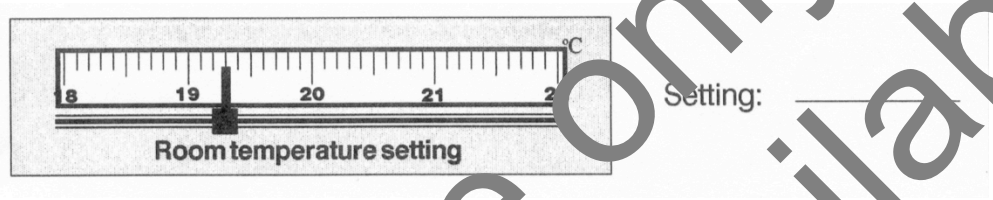
Exploring decimals on measuring scales Practice Sheet 2

1. Patricia had her temperature taken. The thermometer looked like this:

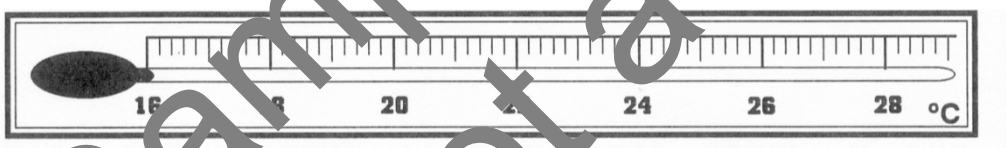


What was her temperature? _____

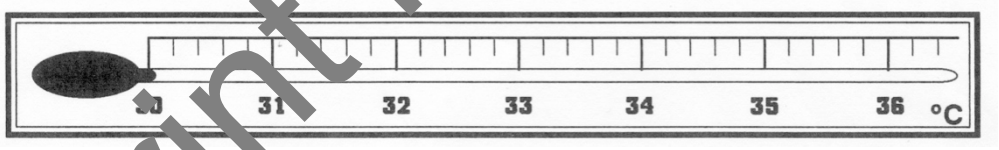
2. For what temperature is this thermostat set?



3. A comfortable room temperature is **20.8°C**. Show this on the thermometer.



4. A summer temperature was **32.7°C.** Show this on the thermometer.



5. Mark these numbers on this scale:

52.5 69.8 60.2 71.6 55