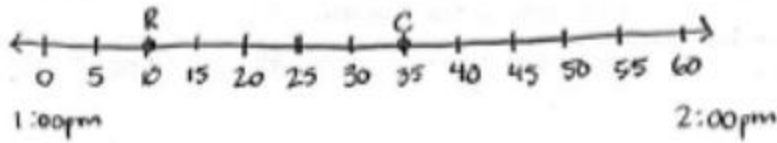


GRADE 3 • MODULE 2

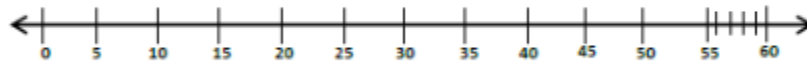
Place Value and Problem Solving with Units of Measure

Topic A: Time Measurement and Problem Solving

- Seconds as a unit of time (60 seconds = 1 minute)
- Minutes are longer than seconds
- Use a number line to tell time to the nearest 5 minutes within 1 hour



- Count by fives and ones on a clock to tell time to the nearest minute



1. Plot points on the number line for each time shown on a clock below. Then draw lines to match the clocks to the points.



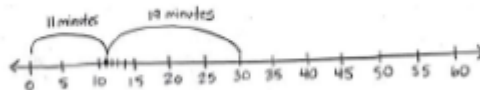
04:01



04:44



- Count forward and backward to add and subtract on the number line.



Topic B: Measuring Weight and Liquid Volume in Metric Units

- Build and decompose a kilogram to reason about the size and weight of 1 kilogram, 100 grams, 10 grams, and 1 gram

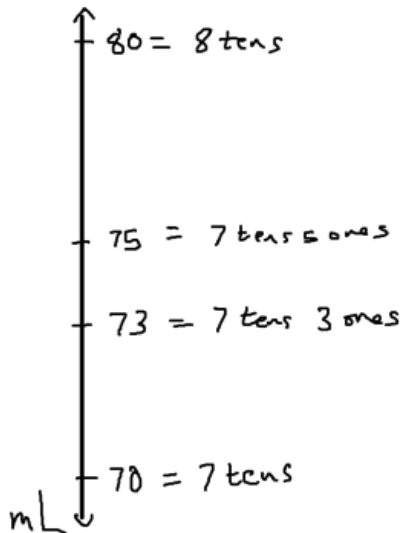
1 kilogram	100 grams	10 grams	1 gram

Thousands	Hundreds	Tens	Ones

- Determine whether the objects weigh *less than*, *more than*, or *about the same as* 1 kilogram
- Build and decompose a liter to reason about the size of 1 liter, 100 milliliters, 10 milliliters, 1 milliliter

Topic C: Rounding to the Nearest Ten and Hundred

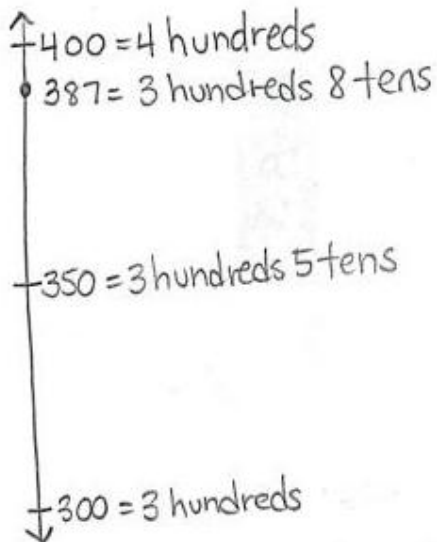
- Round two-digit measurements to the nearest ten and hundred on the vertical number line.



73 milliliters is less than halfway between 70 and 80 milliliters. I know because 3 is less than 5, and 5 marks halfway. \rightarrow 73 is 7 away from 80, but only 3 away from 70.

73 milliliters rounded to the nearest ten is 70 milliliters. Another way to say it is that 73 milliliters is **about** 70 milliliters. *About* means that 70 milliliters is not the exact amount.

Object	Measurement (in cm)	The object measures between (which two tens)...	Length Rounded to the Nearest 10 cm
Example: My shoe	23 cm	20 and 30 cm	20 cm



Topic D: Two- and Three-Digit Measurement Addition Using the Standard Algorithm

- Add measurements using the standard algorithm to compose larger units once.

$$\begin{array}{r} 56 \text{ mL} \\ + 27 \text{ mL} \\ \hline 83 \text{ mL} \end{array}$$

This is how we show how we rename using the **standard algorithm**. 6 ones plus 7 ones equals 13 ones. We can bundle ten ones to make 1 ten. We then write the 1 so that it crosses the line under the tens in the tens place, and the 3 below the line in the ones column. This way you write 13 rather than 3 and 1 as separate numbers. We then add the tens, which is 8.

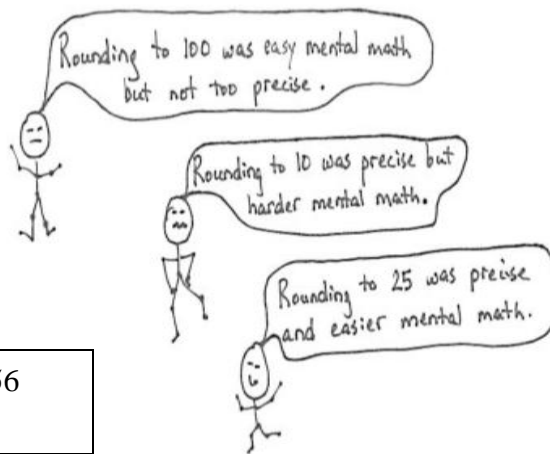
- Estimate sums by rounding and apply to solve measurement word problems.

175 + 256 = 431

200 + 300 = 500

180 + 260 = 440

200 + 256 = 456



Topic E: Two- and Three-Digit Measurement Subtraction using the Standard Algorithm

- Decompose to subtract measurements including three-digit minuends with zeros in the tens or ones place.

$$\begin{array}{r} 710 \\ \cancel{80}5 \\ - 324 \\ \hline 481 \end{array}$$

T: Is the number of units in the top digit of the ones greater than or equal to that of the bottom digit?

S: Yes.

T: Is that true in the tens place too?

S: No. We need to unbundle a hundred, and then solve.

- Estimate differences by rounding and apply to solve measurement word problems.

$$362 - 189$$

↓

$$400 - 200 = 200$$

$$360 - 190 = 170$$

$$362 - 200 = 162$$

$$362 - 189 = 173$$

