

# Contents

An Introduction to <i>Data and Measurement</i> .....	5
Learning Objectives .....	6
<b>REVIEW SHEETS .....</b>	<b>7–22</b>
The Metric System .....	8
Converting Customary Units to Metric Units .....	9
Converting Metric Units to Customary Units .....	10
Units of Measurement: Length .....	11
Units of Measurement: Weight .....	12
Units of Measurement: Area .....	13
Units of Measurement: Volume .....	14
Units of Measurement: Capacity .....	15
Units of Measurement: Time .....	16
Units of Measurement: Temperature .....	17
Reading an Information Table .....	18
Reading Line Graphs .....	19
Reading Bar Graphs .....	20
Reading Picture Graphs .....	21
Reading a Circle Graph .....	22
<b>SKILL-BUILDER SHEETS .....</b>	<b>23–43</b>
Sid the Sorcerer’s New Potion: Converting Customary Units to Metric Units .....	24
Bigsby Booster and the Planet Goolog: Converting Metric Units to Customary Units .....	25
The Haunted Castle: Length .....	26
Joe Escapade’s Island Treasures: Weight .....	27
The Rainey Mansion Expansion: Area .....	28
Dorothy’s Liquid Collection: Volume .....	29
The Giant Hot Fudge Sundae: Capacity .....	30
Mr. Higgins’ History Class: Time .....	31
Robot 9Y-5’s Big Test: Temperature .....	32
The Yoo Yoo Yaks: Reading an Information Table .....	33–34
Weird Food: Reading an Information Table .....	35–36
The Search for Popcorn Paulie: Reading a Line Graph .....	37
Candyville Sales Slump: Reading a Line Graph .....	38
Treasures of the <i>S.S. Tubbsman</i> : Reading a Bar Graph .....	39
Mrs. Kratzal’s Flower Bed: Reading a Bar Graph .....	40–41

Kym Komet’s Star Watch: Reading a Picture Graph .....	42
The Cowlick County Carnival: Reading a Circle Graph .....	43
<b>EXTRA-PRACTICE SHEETS .....</b>	<b>45–54</b>
The Lost City of Rooten Ha .....	46
Knucklehead Strikes Again .....	47
Lugar the Giant’s Wardrobe .....	48
Zylorian Souvenirs .....	49
Wooenheimer’s Monster Gets a Cold .....	50
Professor Bonkers’ Secret Formula .....	51
Nasty Nedra’s Pranks .....	52
Pete the Zookeeper’s Food Charts .....	53–54
<b>TABLES .....</b>	<b>55–57</b>
<b>SOLUTIONS .....</b>	<b>58–64</b>

# Sid the Sorcerer's New Potion

## (Converting Customary Units to Metric Units)

Sid the Sorcerer discovered a new potion recipe in his *Sorcerer's Weekly* magazine. Unfortunately, all of the measurements were in customary units. Sid prefers to work in metric units.

Use the chart below to help Sid prepare the potion.

To change inches to millimeters .....	multiply by 25
To change feet to centimeters .....	multiply by 30
To change yards to meters .....	multiply by 0.9
To change miles to kilometers .....	multiply by 1.6
To change fluid ounces to milliliters .....	multiply by 30
To change pints to liters .....	multiply by 0.47
To change quarts to liters .....	multiply by 0.95
To change gallons to liters .....	multiply by 3.8
To change ounces to grams .....	multiply by 28
To change pounds to kilograms .....	multiply by 0.45

1. If the recipe calls for 4 pounds of fingernail clippings, how many kilograms of fingernail clippings will Sid need?
2. Sid has 2.3 meters of bat-hair rope. The recipe calls for 2 yards. Does Sid have enough bat-hair rope?
3. Sid has 1.5 liters of pond slime. The recipe calls for 4 quarts of pond slime. How much more pond slime does Sid need for the potion?
4. The recipe calls for 2 quarts of root beer and 5 pints of ketchup. How many liters of root-beer and ketchup combined are needed?
5. The recipe calls for 200 fluid ounces of tree sap. How many liters of tree sap will Sid need? Round to the nearest whole number.

# Bigsby Booster and the Planet Goolog

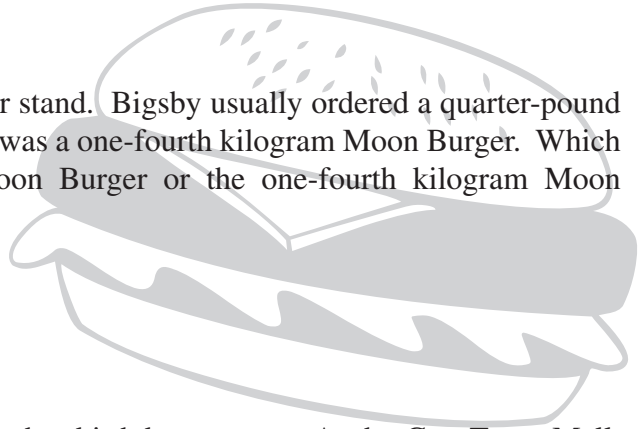
## (Converting Metric Units to Customary Units)

Joe Escapade was exploring a group of tropical islands when he discovered the volcanic island of Ro. On the island, he found three circular ponds, each more dangerous than the last.

To change millimeters to inches .....	multiply by 0.04
To change centimeters to inches .....	multiply by 0.4
To change meters to yards .....	multiply by 1.1
To change kilometers to miles .....	multiply by 0.6
To change milliliters to fluid ounces.....	multiply by 0.034
To change liters to pints .....	multiply by 2.1
To change liters to quarts .....	multiply by 1.06
To change liters to gallons .....	multiply by 0.26
To change grams to ounces.....	multiply by 0.035
To change kilograms to pounds .....	multiply by 2.2

1. After landing on Goolog, Bigsby explored the Goologian purple deserts. He saw a sign that read, "Goo Town: 12 kilometers." How many miles was Bigsby from Goo Town?

2. In Goo Town, Bigsby found a Moon Burger stand. Bigsby usually ordered a quarter-pound Moon Burger. On Goolog, the only choice was a one-fourth kilogram Moon Burger. Which burger was bigger, the quarter-pound Moon Burger or the one-fourth kilogram Moon Burger?



3. Bigsby's niece wanted La Goo Perfume for her birthday present. At the Goo Town Mall, Bigsby saw some 25-milliliter bottles of the perfume. He decided to buy 5 bottles. How many fluid ounces of La Goo Perfume did Bigsby buy?

4. Before leaving the planet, Bigsby stopped at the Goo Town Candy Shoppe. He bought 35 centimeters of red licorice. Since he was on a diet, Bigsby could only eat 2 inches of licorice per day. How many days would the licorice last him?