Grade 5 Module 4

Tips for Families

Key Concepts Overview

Focus TEKS: **5.3I, 5.3J, 5.3K, 5.3L, 5.4E, 5.4F, 5.7A, 5.9A, 5.9C, 5.10A, 5.10B, 5.10C, 5.10D, 5.10E, 5.10F**

The focus of Module 4 is understanding how to multiply whole numbers by fractions and how to begin dividing fractions. These operations are applied to create and solve word problems and interpret and evaluate numerical expressions. Multiplication involving a fraction is used when interpreting dot plots, converting measurements, and understanding personal financial literacy. Your student will:

- ☐ Multiply a whole number by a fraction or by a mixed number using strip diagrams, the associative property, and the distributive property.
- ☐ Solve and create fraction word problems involving addition, subtraction, and multiplication.
- ☐ Convert mixed unit measurements for customary and metric units.
- ☐ Divide a whole number by a unit fraction and a unit fraction by a whole number.
- ☐ Apply fraction and decimal multiplication to personal financial literacy to understand a simple **budget**, **gross income**, **net income**, **income tax**, **payroll tax**, **sales tax,** and **property tax.**
- ☐ Interpret, compare, and evaluate numerical expressions.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages of the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Use fruits or vegetables to demonstrate fractions. If necessary, help your student put the fruits or vegetables into equal groups and then count them. Some examples include the following:
  - There are 25 blueberries in a box. What is $\frac{3}{5}$ of 25 blueberries? (15 blueberries)
  - There are 30 grape tomatoes in a box. What is $\frac{5}{6}$ of 30 grape tomatoes? (25 grape tomatoes)
- Play the "Take That to the Bean Bank" game. You will need several cups and some dried beans.
  1. Explain that 1 bean represents $1, and give your student an allowance of 100 beans. Create several budgeting categories such as savings, clothing, activities, and donations. Label the cups with the name of each category.
  2. Assign the fraction $\frac{1}{10}$ to the savings category and help her determine how many beans must be assigned to the savings category based on that fraction.
  3. Have your student place the correct number of beans into the savings cup.
  4. To reinforce the concept of a balanced budget, help her determine how the remaining beans should be allocated among the other categories.

5. Have your student look online, or in other printed sources, for the prices of items they would like to purchase. Help her decide whether she has adequately budgeted for these items.
6. For each item purchased, have your student remove the correct number of beans from the cup labeled with that category. If needed, round the amount to the nearest whole number. This helps simulate paying for the purchased items. To extend this activity, help your student use a calculator to determine sales tax on any purchases.

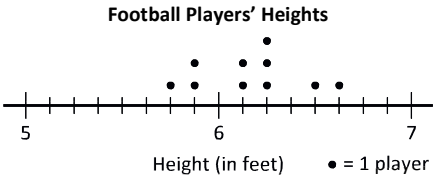
Terms

Budget: a plan for saving and spending money

Terry's Budget	
Description	**Amount**
Food	$50
Clothes	$125
Activities	$25
Charitable donation	$50

Balanced budget: a budget with expenses that are exactly equal to income. Terry receives $100 per month for dog walking and $150 per month for babysitting. The table shows Terry's budget. Terry's total monthly income is $250. Terry's total monthly expenses are $250. Terry has a balanced budget because the amount of his expenses are equal to the amount of his income.

Dot Plot: a plot of numerical data along a number line

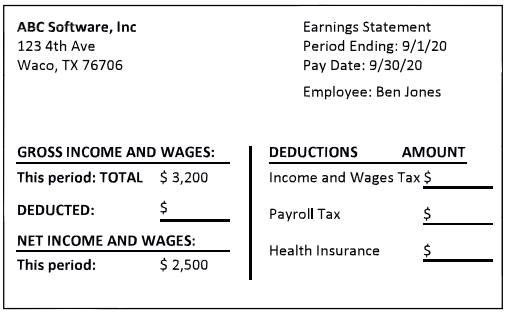


Gross income: total amount of money received before taxes and other deductions are subtracted

Net income: the amount of money left after taxes and other deductions are subtracted

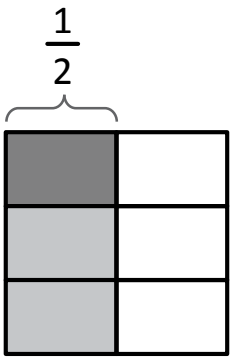
Income tax: money the government collects based on a person's income

Payroll tax: money collected to help fund programs that help people when they retire



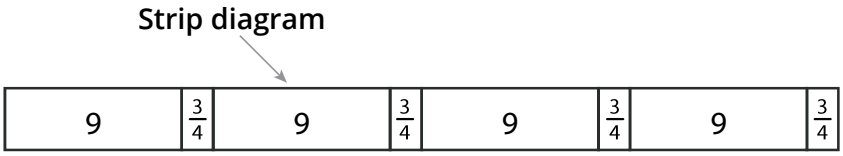
Models

Area Model



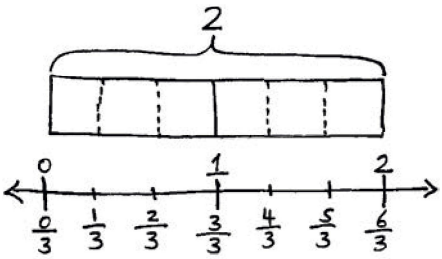
$$\frac{1}{2} \div 3 = \frac{1}{6}$$

Strip Diagram



$$4 \times 9\tfrac{3}{4} = 36 + \tfrac{12}{4}$$
$$= 36 + 3$$
$$= 39$$

Strip Diagram and Number Line



$2 \div \frac{1}{3} = 6$