Topic D
Multiplication Word Problems

4.OA.1, 4.OA.2, 4.OA.3, 4.NBT.5

Focus Standard:

4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 \times 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison. (See CCLS Glossary, Table 2.)

4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Instructional Days: 2

Coherence - Links from:

G3–M1 Properties of Multiplication and Division and Problem Solving with Units of 2–5 and 10
G3–M3 Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10

Coherence - Links to:

G5–M2 Multi-Digit Whole Number and Decimal Fraction Operations

Topic D gives students the opportunity to apply their new multiplication skills to solve multi-step word problems (4.OA.3) and multiplicative comparison problems (4.OA.2). In Lesson 12, students extend their work with multiplicative comparison from Topic A to solve real word problems. Students use a combination of addition, subtraction, and multiplication to solve multi-step problems in Lesson 13.
Problem 4: In one month, Charlie read 814 pages. In the same month his mom read 4 times as many pages as Charlie, and that was 143 pages more than Charlie’s dad read. What was the total number of pages read by Charlie and his parents?

Solution:

\[
\begin{align*}
814 & \quad \frac{3256}{\quad 3113} \\
\times 4 & \quad \frac{-143}{\quad 3113} \\
3256 & \quad \frac{814}{\quad 7183}
\end{align*}
\]

Solution B:

Charlie and his parents read 7,183 pages in one month.

A Teaching Sequence Towards Mastery of Multiplication Word Problems

Objective 1: Solve two-step word problems, including multiplicative comparison.
(Lesson 12)

Objective 2: Use multiplication, addition, or subtraction to solve multi-step word problems.
(Lesson 13)
Lesson 12

Objective: Solve two-step word problems, including multiplicative comparison.

Suggested Lesson Structure

<table>
<thead>
<tr>
<th>Fluency Practice (12 minutes)</th>
<th>Concept Development (35 minutes)</th>
<th>Student Debrief (13 minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Time (60 minutes)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fluency Practice (12 minutes)**

- Multiply Mentally **4.NBT.5** (4 minutes)
- Multiply in Three Different Ways **4.NBT.5** (8 minutes)

**Multiply Mentally (4 minutes)**

Materials: (S) Personal white boards

Note: Reviewing these mental multiplication strategies will provide a foundation for students to succeed during the Concept Development.

Repeat the process from G4–M3–Lesson 11 with the following possible sequence: 3,421 × 2, 2,302 × 3, 2,112 × 4, and 2,023 × 4.

**Multiply in Three Different Ways (8 minutes)**

Materials: (S) Number disks

Note: This drill will review the Concept Development of G4–M3–Topic C.

Repeat the fluency from G4–M3–Lesson 11, expanding to three- and four-digit numbers for possible sequence: 245 × 2, 301 × 5, 5,241 × 2.
Lesson 12

Solve two-step word problems, including multiplicative comparison.

Date: 8/28/13

© 2013 Common Core, Inc. Some rights reserved. commoncore.org

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Concept Development (35 minutes)

Materials: (S) Problem Set

Note: For this lesson, the Problem Set will be comprised of word problems from the Concept Development and is, therefore, to be used during the lesson itself.

For Problems 1–4 below, students may work in pairs to solve each of the problems using the RDW approach to problem solving.

1. Model the problem.

Have two pairs of students who you think can be successful with modeling the problem work at the board while the others work independently or in pairs at their seats. Review the following questions before beginning the first problem.

- Can you draw something?
- What can you draw?
- What conclusions can you make from your drawing?

As students work, circulate. Reiterate the questions above.

After two minutes, have the two pairs of students share only their labeled diagrams.

For about one minute, have the demonstrating students receive and respond to feedback and questions from their peers.

2. Calculate to solve and write a statement.

Give everyone two minutes to finish work on that question, sharing their work and thinking with a peer. All should then write their equations and statements of the answer.

3. Assess the solution.

Give students one to two minutes to assess the solutions presented by their peers on the board, comparing the solutions to their own work. Highlight alternative methods to reach the correct solution.
Problem 1

The table shows the cost of party favors. Each party guest receives a bag with 1 balloon, 1 lollipop, and 1 bracelet. What is the total cost for 9 guests?

This two-step problem requires students to determine the cost of party favors for one guest and then use that information to determine the total cost of party favors for 9 guests. Although RDW is reviewed prior to beginning work on this problem, because of its simplicity, many students will elect to begin solving immediately. Some students may choose to multiply each item by 9 before adding those amounts. Based on their prior experience with money, some students may represent the total amount of 657 cents as $6.57.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 balloon</td>
<td>26¢</td>
</tr>
<tr>
<td>1 lollipop</td>
<td>14¢</td>
</tr>
<tr>
<td>1 bracelet</td>
<td>33¢</td>
</tr>
</tbody>
</table>

Problem 2

The Turner family uses 548 liters of water per day. The Hill family uses 3 times as much water per day. How much water does the Hill family use per week?

In solving this problem, students use information from the problem and their knowledge of language denoting multiplicative comparison to determine their answer. They must also remember that there are 7 days in each week in order to complete the computation necessary to finish the problem. Models chosen for this problem may include tape diagrams as shown.
Problem 3

Jayden has 347 marbles. Elvis has 4 times as many as Jayden. Presley has 799 fewer than Elvis. How many marbles does Presley have?

This two-step problem affords students another opportunity to model with tape diagrams. They are required to apply what they have learned about multiplying multi-digit numbers by single digits, as well as practice their subtraction with multiple regrouping skills from Module 1. Encourage students to also practice mental math, such as when subtracting 799 from 1,388. As illustrated below, note that the diagram may or may not accurately show the relationship between 799 and the unit size, 347. Nevertheless, discuss how one might use mental math to estimate how long Presley’s bar should be.

\[
\begin{align*}
J & \quad 347 \quad 1388 \\
E & \quad 1388 \quad 588 \\
R & \quad 1388 - 800 = 588 \\
\end{align*}
\]

Presley has 589 marbles.

Problem 4

a. Write an equation that would allow someone to find the value of R.

\[
\begin{align*}
1167 & \quad 1167 \quad 1167 \\
R & \quad 239 \\
\end{align*}
\]

\[
R + 239 = 1167 \times 3 \\
R = 3 \times 1167 - 239
\]

Student equations may include one or both of the equations above. They must include the use of the R for the unknown quantity and show that R is equal to 239 less than three times 1,167.

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Support English language learners as they write their own word problem. Provide sentence starters and a word bank.

Sentence starters may include:

“I had ___ (units),”
“How many ___ in all?”

Possible words for the word bank may include:

times as many fewer than
more than total difference
b. Write your own word problem to correspond to this tape diagram, and solve.

Responses will vary. Guide students with a context for creating a situation to write about, such as the number of students who attend two schools or the weights of objects.

Patti's sandals weigh 1,167 grams. She bought 3 pairs, all different colors! All 3 pairs of sandals together weigh 239 grams more than her winter boots. What is the weight of Patti's winter boots?

![Tape diagram with calculations]

Solution A:

\[
\begin{align*}
1167 \times \frac{3}{3501g} &= 339.4 \\
\frac{3}{3501g} &= 239g \\
\frac{3}{3501g} &= 326.2g
\end{align*}
\]

Solution B:

\[
\begin{align*}
1167 \times \frac{3}{3501g} &= 339.4 \\
\frac{3}{3501g} &= 239g \\
\frac{3}{3501g} &= 326.2g
\end{align*}
\]

Patti's winter boots weigh 3,262 grams.

Problem Set (10 minutes)

Please note that the Problem Set for Lesson 12 is comprised of this lesson's problems as stated in the introduction of the lesson.

Student Debrief (13 minutes)

Lesson Objective: Solve two-step word problems, including multiplicative comparison.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the problems and process the lesson.
Lesson 12
Solve two-step word problems, including multiplicative comparison.

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students’ understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.

You may choose to use any combination of the questions below to lead the discussion.

- How was Problem 1 similar to the other problems we did today? How was it different?
- How was setting up Problem 2 similar to setting up Problem 3? At what point did the two problems become quite different?
- What piece of information did you need to know to solve Problem 2 that was not given to you in the problem?
- Share the word problem you created for Problem 4(b) with your partner. Solve each other’s problems, and take turns explaining the strategy you used to solve it.
Use the RDW process to solve the following problems.

1. The table shows the cost of party favors. Each party guest receives a bag with 1 balloon, 1 lollipop, and 1 bracelet. What is the total cost for 9 guests?

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 balloon</td>
<td>26¢</td>
</tr>
<tr>
<td>1 lollipop</td>
<td>14¢</td>
</tr>
<tr>
<td>1 bracelet</td>
<td>33¢</td>
</tr>
</tbody>
</table>

2. The Turner family uses 548 liters of water per day. The Hill family uses 3 times as much water per day. How much water does the Hill family use per week?

3. Jayden has 347 marbles. Elvis has 4 times as many as Jayden. Presley has 799 fewer than Elvis. How many marbles does Presley have?
4.
   a. Write an equation that would allow someone to find the value of $R$.

   $1167 \quad 1167 \quad 1167$

   $\underline{R} \quad 239$

   b. Write your own word problem to correspond to this tape diagram, then solve.
Use the RDW process to solve the following problem.

1. Jennifer has 256 pink beads. Stella has 3 times as many beads as Jennifer. Tiah has 104 more beads than Stella. How many beads does Tiah have?
Lesson 12 Homework

Use the RDW process to solve the following problems.

1. The table shows the number of stickers of various types in Chrissy’s new sticker book. Chrissy’s six friends also own the same sticker book. How many stickers do Chrissy and her six friends have altogether?

<table>
<thead>
<tr>
<th>Type of Sticker</th>
<th>Number of Stickers</th>
</tr>
</thead>
<tbody>
<tr>
<td>flowers</td>
<td>32</td>
</tr>
<tr>
<td>smiley faces</td>
<td>21</td>
</tr>
<tr>
<td>hearts</td>
<td>39</td>
</tr>
</tbody>
</table>

2. The small copier makes 437 copies each day. The large copier makes 4 times as many copies each day. How many copies does the large copier make each week?

3. Jared sold 194 Boy Scout chocolate bars. Matthew sold three times as many as Jared. Gary sold 297 fewer than Matthew. How many bars did Gary sell?
4. a. Label the rest of the diagram below. Solve for M.

\[
\begin{array}{c}
973 \text{ meters} \\
723 \text{ meters} \\
M
\end{array}
\]

b. Write your own problem that could be solved using the diagram above.
Lesson 13

Objective: Use multiplication, addition, or subtraction to solve multi-step word problems.

Suggested Lesson Structure

- Fluency Practice (12 minutes)
- Concept Development (35 minutes)
- Student Debrief (13 minutes)

Total Time (60 minutes)

Fluency Practice (12 minutes)

- Sprint: Mental Multiplication 4.NBT.5 (9 minutes)
- Multiply using the Standard Algorithm 4.NBT.4 (3 minutes)

Sprint: Mental Multiplication (9 minutes)

Materials: (S) Mental Multiplication Sprint

Notes: This Sprint will reinforce partial product multiplication strategies.

Multiply using the Standard Algorithm (3 minutes)

Materials: (S) Personal whiteboards

Note: This fluency drill will review the Concept Development from G4–M3–Lessons 10 and 11.

T: (Write 773 × 2.) On your boards, solve the multiplication sentence using the standard algorithm.

Repeat for process for possible sequence: 147 × 3, 1,605 × 3, and 5,741 × 5.
Lesson 13: Use multiplication, addition, or subtraction to solve multi-step word problems.

Date: 8/28/13

Concept Development (35 minutes)

Materials: (S) Problem Set

Note: For this lesson, the Problem Set will be comprised of word problems from the Concept Development and is, therefore, to be used during the lesson itself.

For Problems 1–4 below, students may work in pairs to solve each of the problems using the RDW approach to problem solving.

1. Model the problem.

Have two pairs of students who you think can be successful with modeling the problem work at the board while the others work independently or in pairs at their seats. Review the following questions before beginning the first problem.

- Can you draw something?
- What can you draw?
- What conclusions can you make from your drawing?

As students work, circulate. Reiterate the questions above.

After two minutes, have the two pairs of students share only their labeled diagrams.

For about one minute, have the demonstrating students receive and respond to feedback and questions from their peers.

2. Calculate to solve and write a statement.

Give everyone two minutes to finish work on that question, sharing their work and thinking with a peer. All should then write their equations and statements of the answer.

3. Assess the solution.

Give students one to two minutes to assess the solutions presented by their peers on the board, comparing the solutions to their own work. Highlight alternative methods to reach the correct solution.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Extend the problems for students working above grade level.

Problem 1: If Kate also deposited $36 of each paycheck into her savings, how much money does she have left to spend after buying the computer and clothes?

Problem 2: Construct a graph or chart that shows Sylvia’s weight over the years.

Problem 3: Use our classroom resources to find out about how many kilograms the crate of apples weighed.

NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Depending on your English language learners’ needs, it may be helpful to provide today’s Problem Set in students’ first language.
Problem 1
Over the summer, Kate earned $180 each week for 7 weeks. Of that money, she spent $375 on a new computer and $137 on new clothes. How much money did she have left?

This multi-step problem requires students to apply their knowledge of multiplication of a multi-digit number by a single-digit number. While most students will apply the multiplication algorithm, they should be encouraged to use whichever strategy they are most comfortable with to complete the multiplication. The sum of $375 and $137 may be found before subtracting it from Kate’s total salary, or the two amounts may be subtracted separately.

She had $748 left.

Problem 2
Sylvia weighed 8 pounds when she was born. By her first birthday, her weight had tripled. By her second birthday, she had gained 12 more pounds. At that time, Sylvia’s father weighed 5 times as much as she did. What was Sylvia and her dad’s combined weight?

In this problem, students will need to compute Sylvia’s weight at two separate points in time. Some students will gravitate to calculations. Others will use tape diagrams or other models to represent the problem. Either is acceptable. They must then multiply Sylvia’s current weight by 6 to find her and her father’s combined weight.

Sylvia and her dad’s combined weight is 216 pounds.

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:
Learners differ in their solution strategies, and classroom discussion is enriched with the sharing of diverse innovative, efficient, thoughtful solutions. Students may choose to omit modeling part of a multi-step problem. For example, the work to the left does not show the tripling of 8. Therefore, the sharing of student work when solving multi-step problems can be even more interesting.

It is best to be prepared to model each step of the problem since students may be overwhelmed by the simplest words when they are embedded within a multi-step problem.
Lesson 13

Problem 3

Three boxes weighing 128 pounds each and one box weighing 254 pounds were loaded onto the back of an empty truck. A crate of apples was then loaded onto the same truck. If the total weight loaded onto the truck was 2,000 pounds, how much did the crate of apples weigh?

This multi-step problem may be modeled or simply solved using algorithms. Students will need to recognize that 128 must be tripled before that total is added to 254. To arrive at the answer to the problem, this new sum must be subtracted from 2,000, requiring students to use a simplifying strategy or to regroup across multiple zeros (a skill they mastered in G4–M1).

Problem 4

In one month, Charlie read 814 pages. In the same month, his mom read 4 times as many pages as Charlie, and that was 143 pages more than Charlie’s dad read. What was the total number of pages read by Charlie and his parents?

In this multi-step problem, students may find that each calculation is dependent upon the following calculation. Encourage students to use simplifying strategies when solving, such as seeing in the model that there are 9 equal-sized rectangles worth 814 pages, minus 143 pages.
Problem Set

Please note that the Problem Set for Lesson 13 is comprised of this lesson’s problems as stated in the introduction.

Student Debrief (13 minutes)

Lesson Objective: Use multiplication, addition, or subtraction to solve multi-step word problems.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson. You may choose to use any combination of the questions below to lead the discussion.

- Explain to your partner how you solved Problem 1. If you used different strategies, discuss how you arrived at the same answer.
- Let’s look at how two different students modeled Problem 2. How are they similar? How are they different?
- Student A, in Problem 4, why did you multiply 814 by 9 and subtract 143? From the model I only see 5 units of 814. (Also draw out the alternate strategies from Problem 3.)
- Student B, would you present your solution. (Student presents.) Does anyone have comments or questions for Student B?
- How did you know what to do when you saw the word *tripled* in Problem 2?
- When might it be better to use multiplication rather than addition?
- What are the advantages to knowing several methods for solving a multiplication problem?
Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students’ understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th># Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 x 4 =</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>10 x 4 =</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>11 x 4 =</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>1 x 2 =</td>
<td>26</td>
</tr>
<tr>
<td>5</td>
<td>20 x 2 =</td>
<td>27</td>
</tr>
<tr>
<td>6</td>
<td>21 x 2 =</td>
<td>28</td>
</tr>
<tr>
<td>7</td>
<td>2 x 3 =</td>
<td>29</td>
</tr>
<tr>
<td>8</td>
<td>30 x 3 =</td>
<td>30</td>
</tr>
<tr>
<td>9</td>
<td>32 x 3 =</td>
<td>31</td>
</tr>
<tr>
<td>10</td>
<td>3 x 5 =</td>
<td>32</td>
</tr>
<tr>
<td>11</td>
<td>20 x 5 =</td>
<td>33</td>
</tr>
<tr>
<td>12</td>
<td>23 x 5 =</td>
<td>34</td>
</tr>
<tr>
<td>13</td>
<td>3 x 3 =</td>
<td>35</td>
</tr>
<tr>
<td>14</td>
<td>40 x 3 =</td>
<td>36</td>
</tr>
<tr>
<td>15</td>
<td>43 x 3 =</td>
<td>37</td>
</tr>
<tr>
<td>16</td>
<td>4 x 2 =</td>
<td>38</td>
</tr>
<tr>
<td>17</td>
<td>70 x 2 =</td>
<td>39</td>
</tr>
<tr>
<td>18</td>
<td>74 x 2 =</td>
<td>40</td>
</tr>
<tr>
<td>19</td>
<td>2 x 3 =</td>
<td>41</td>
</tr>
<tr>
<td>20</td>
<td>60 x 3 =</td>
<td>42</td>
</tr>
<tr>
<td>21</td>
<td>62 x 3 =</td>
<td>43</td>
</tr>
<tr>
<td>22</td>
<td>63 x 3 =</td>
<td>44</td>
</tr>
</tbody>
</table>

© Bill Davidson
<table>
<thead>
<tr>
<th></th>
<th>Multiply:</th>
<th>Improvement</th>
<th># Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 x 6 =</td>
<td>23</td>
<td>21 x 4 =</td>
</tr>
<tr>
<td>2</td>
<td>10 x 6 =</td>
<td>24</td>
<td>121 x 4 =</td>
</tr>
<tr>
<td>3</td>
<td>11 x 6 =</td>
<td>25</td>
<td>24 x 2 =</td>
</tr>
<tr>
<td>4</td>
<td>1 x 2 =</td>
<td>26</td>
<td>124 x 2 =</td>
</tr>
<tr>
<td>5</td>
<td>30 x 2 =</td>
<td>27</td>
<td>224 x 2 =</td>
</tr>
<tr>
<td>6</td>
<td>31 x 2 =</td>
<td>28</td>
<td>324 x 2 =</td>
</tr>
<tr>
<td>7</td>
<td>3 x 3 =</td>
<td>29</td>
<td>424 x 2 =</td>
</tr>
<tr>
<td>8</td>
<td>20 x 3 =</td>
<td>30</td>
<td>3 x 2 =</td>
</tr>
<tr>
<td>9</td>
<td>23 x 3 =</td>
<td>31</td>
<td>13 x 2 =</td>
</tr>
<tr>
<td>10</td>
<td>5 x 5 =</td>
<td>32</td>
<td>213 x 2 =</td>
</tr>
<tr>
<td>11</td>
<td>20 x 5 =</td>
<td>33</td>
<td>1213 x 2 =</td>
</tr>
<tr>
<td>12</td>
<td>25 x 5 =</td>
<td>34</td>
<td>2113 x 2 =</td>
</tr>
<tr>
<td>13</td>
<td>4 x 4 =</td>
<td>35</td>
<td>2131 x 2 =</td>
</tr>
<tr>
<td>14</td>
<td>30 x 4 =</td>
<td>36</td>
<td>2311 x 2 =</td>
</tr>
<tr>
<td>15</td>
<td>34 x 4 =</td>
<td>37</td>
<td>23 x 4 =</td>
</tr>
<tr>
<td>16</td>
<td>4 x 2 =</td>
<td>38</td>
<td>53 x 5 =</td>
</tr>
<tr>
<td>17</td>
<td>90 x 2 =</td>
<td>39</td>
<td>45 x 3 =</td>
</tr>
<tr>
<td>18</td>
<td>94 x 2 =</td>
<td>40</td>
<td>36 x 6 =</td>
</tr>
<tr>
<td>19</td>
<td>2 x 3 =</td>
<td>41</td>
<td>215 x 3 =</td>
</tr>
<tr>
<td>20</td>
<td>40 x 3 =</td>
<td>42</td>
<td>125 x 4 =</td>
</tr>
<tr>
<td>21</td>
<td>42 x 3 =</td>
<td>43</td>
<td>5312 x 2 =</td>
</tr>
<tr>
<td>22</td>
<td>43 x 3 =</td>
<td>44</td>
<td>1235 x 4 =</td>
</tr>
</tbody>
</table>

© Bill Davidson
Lesson 13 Problem Set

Name ________________________________  Date ________________

Solve using the RDW process.

1. Over the summer, Kate earned $180 each week for 7 weeks. Of that money, she spent $375 on a new computer and $137 on new clothes. How much money did she have left?

2. Sylvia weighed 8 pounds when she was born. By her first birthday, her weight had tripled. By her second birthday, she had gained 12 more pounds. At that time, Sylvia’s father weighed 5 times as much as she did. What was Sylvia and her dad’s combined weight?
3. Three boxes weighing 128 pounds each and one box weighing 254 pounds were loaded onto the back of an empty truck. A crate of apples was then loaded onto the same truck. If the total weight loaded onto the truck was 2,000 pounds, how much did the crate of apples weigh?

4. In one month, Charlie read 814 pages. In the same month, his mom read 4 times as many pages as Charlie, and that was 143 pages more than Charlie’s dad read. What was the total number of pages read by Charlie and his parents?
Lesson 13 Exit Ticket

1. Solve using the RDW process.
   a. Michael earns $9 per hour. He works 28 hours each week. How much will he earn in 6 weeks?
   b. David earns $8 per hour. He works 40 hours each week. How much will he earn in 6 weeks?
   c. After 6 weeks who earned more money? How much more money?
Name  

Date  

Solve using the RDW process.

1. A pair of jeans costs $89. A jean jacket costs twice as much. What is the total cost of a jean jacket and 4 pairs of jeans?

2. Sarah bought a shirt on sale for $35. The original price of the shirt was 3 times that amount. Sarah also bought a pair of shoes on sale for $28. The original price of the shoes was 5 times that amount. How much money did the shirt and shoes cost before they went on sale?
3. All 3,000 seats in a theater are being replaced. So far, 5 sections of 136 seats and a sixth section containing 348 seats have been replaced. How many more seats do they still need to replace?

4. Computer Depot sold 762 reams of paper. Paper Palace sold 3 times as much paper as Computer Depot and 143 reams more than Office Supply Central. How many reams of paper were sold by all three stores combined?