Name _____ Date _____

Unit 9: Home Practice

Part 1 Multiplication and Division Practice

Solve the following problems. Estimate to be sure your answers are reasonable. Use the *Multidigit Multiplication Strategies Menu* and *Division Strategies Menu* in the *Student Guide* Reference section.

1. **A.** 2170 ÷ 52 =
   B. 28 × 69 =
   C. 1307 × 9 =
   D. 9603 ÷ 3 =
   E. 444 × 99 =
   F. 300 × 60 =
2. Explain your estimation strategy for Question 1A.
3. Explain a mental math strategy for one of the problems in Question 1.

***Teacher Guide* - Page 1**

Name _____ Date _____

Part 2 Going to the Theater

Arti and Lin helped collect tickets at Arti's mother's theater. Tickets for the play are $14 for adults and $9 for students. Adult theater members get a discount and only have to pay half-price ($7).

Number of Tickets in Each Category

Performance	Adult Tickets (full price)	Student Tickets	Adult Member Tickets
Friday	97	15	13
Saturday	103	21	20
Sunday	82	43	5

1. How many people attended each performance of the play?
2. Find the amount of money collected for each performance.
3. How many more adults than students saw the play?

***Teacher Guide* - Page 2**

Teacher Guide

Part 1. Multiplication and Division Practice (TG p. 1)
Questions 1–3

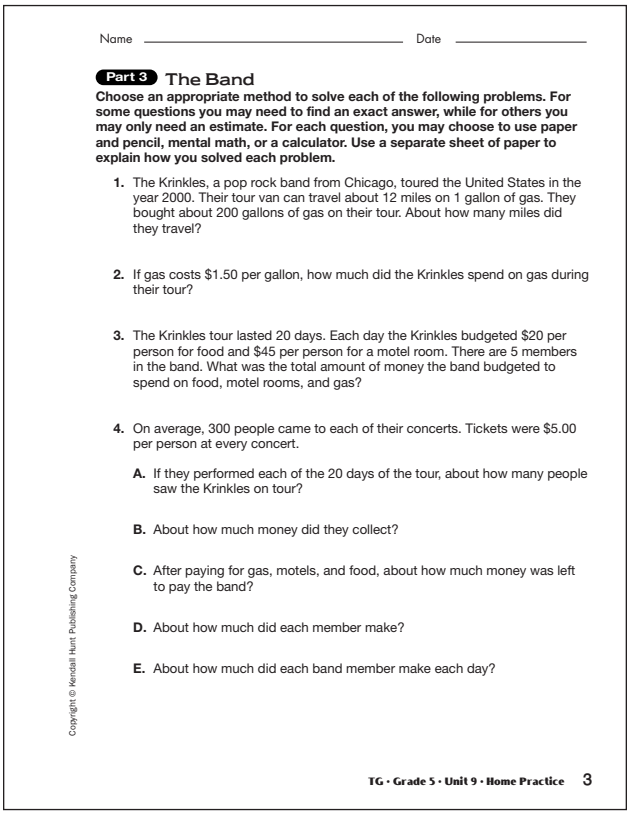
1. **A.** 41.73 or 41 R38 **B.** 1932
   C. 11,763 **D.** 3201
   E. 43,956 **F.** 18,000
2. Strategies will vary. One possible strategy:
   $2000 \div 50 = 40$
3. Possible response for 1E.
   $444 \times 100 = 44{,}400$
   $44{,}400 - 400 = 44{,}000$
   $44{,}000 - 40 = 43{,}960$
   $43{,}960 - 4 = 43{,}956$

Part 2. Going to the Theater (TG p. 2)
Questions 1–3

1. Friday: 125
   Saturday: 144
   Sunday: 130
2. Friday: $1584
   Saturday: $1771
   Sunday: $1570
3. $320 - 79 = 241$ more adults

Part 3. The Band (TG p. 3)
Questions 1–4

1. About 2400 miles
2. $300
3. $6500 + $300 = $6800
4. A. 6000 people
   B. $30,000
   C. $30,000 − $6800 = $23,200
   D. $4640
   E. $232



Name _____ Date _____

Part 3 The Band

Choose an appropriate method to solve each of the following problems. For some questions you may need to find an exact answer, while for others you may only need an estimate. For each question, you may choose to use paper and pencil, mental math, or a calculator. Use a separate sheet of paper to explain how you solved each problem.

1. The Krinkles, a pop rock band from Chicago, toured the United States in the year 2000. Their tour van can travel about 12 miles on 1 gallon of gas. They bought about 200 gallons of gas on their tour. About how many miles did they travel?

2. If gas costs $1.50 per gallon, how much did the Krinkles spend on gas during their tour?

3. The Krinkles tour lasted 20 days. Each day the Krinkles budgeted $20 per person for food and $45 per person for a motel room. There are 5 members in the band. What was the total amount of money the band budgeted to spend on food, motel rooms, and gas?

4. On average, 300 people came to each of their concerts. Tickets were $5.00 per person at every concert.
   A. If they performed each of the 20 days of the tour, about how many people saw the Krinkles on tour?
   B. About how much money did they collect?
   C. After paying for gas, motels, and food, about how much money was left to pay the band?
   D. About how much did each member make?
   E. About how much did each band member make each day?

TG • Grade 5 • Unit 9 • Home Practice 3

***Teacher Guide* - Page 3**

Name _____ Date _____

Part 4 Exponents and Order of Operations

Use the order of operations to find the value.

A. $9^3 \times 5 \div 3 =$ **B.** $(4^4 + 4) \div 10 =$

C. $(6 + 3) \times 5^2 \div 5 =$ **D.** $(3^2 \times 6) + 8 \div 4 =$

Part 5 Using Exponents

1. Each of the three numbers below is written as a product of primes. Rewrite the prime factorizations using exponents.
   - **A.** $180 = 2 \times 3 \times 5 \times 2 \times 3 =$ _____
   - **B.** $2125 = 5 \times 17 \times 5 \times 5 =$ _____
   - **C.** $17{,}820 = 11 \times 2 \times 3 \times 3 \times 5 \times 2 \times 3 \times 3 =$ _____
2. Write each of the following numbers as a product of its primes without exponents. Use factor trees. Then write the number as a product of its primes using exponents.
   - **A.** 20 **B.** 48 **C.** 56

***Teacher Guide* - Page 4**

Part 4. Exponents and Order of Operations (TG p. 4)

Questions A–D

A. 1215

B. 26

C. 45

D. 56

Part 5. Using Exponents (TG p. 40)

Questions 1–2

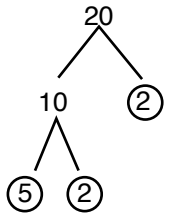
1. **A.** $180 = 2^2 \times 3^2 \times 5$

   B. $2125 = 5^3 \times 17$

   C. $17{,}820 = 2^2 \times 3^4 \times 5 \times 11$

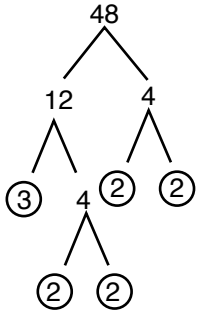
2. **A.** $20 = 5 \times 2 \times 2$

   $20 = 2^2 \times 5$



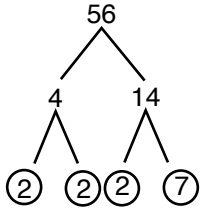
B. $48 = 3 \times 2 \times 2 \times 2 \times 2$

$48 = 2^4 \times 3$



C. $56 = 2 \times 2 \times 2 \times 7$

$56 = 2^3 \times 7$



Part 6. Practice Computation (TG p. 5) Questions A–H

Estimation strategies will vary.

A. 1058; $50 \times 20 = 1000$

B. 3348; The answer will be less than 372×10 or 3720.

C. 19250; $4000 \times 5 = 20{,}000$

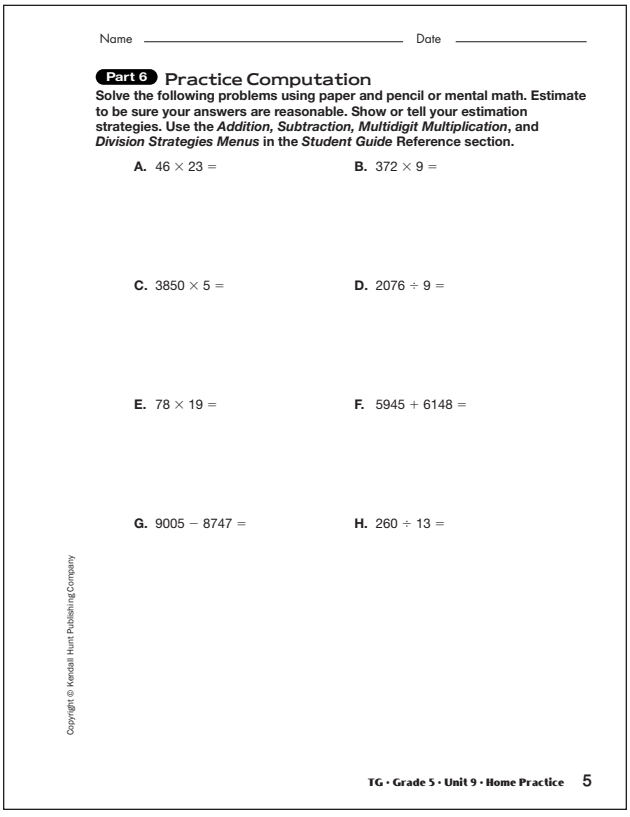
D. 230 R6;
$2000 \div 10 = 200$

E. 1482; $75 \times 20 = 1500$

F. 12,093; $6000 + 6000 = 12{,}000$

G. 258; $9000 - 8750 = 250$

H. 20; $260 \div 10 = 26$



Name _____ Date _____

Part 6 Practice Computation

Solve the following problems using paper and pencil or mental math. Estimate to be sure your answers are reasonable. Show or tell your estimation strategies. Use the *Addition, Subtraction, Multidigit Multiplication*, and *Division Strategies Menus* in the *Student Guide* Reference section.

A. $46 \times 23 =$

B. $372 \times 9 =$

C. $3850 \times 5 =$

D. $2076 \div 9 =$

E. $78 \times 19 =$

F. $5945 + 6148 =$

G. $9005 - 8747 =$

H. $260 \div 13 =$

TG • Grade 5 • Unit 9 • Home Practice 5

***Teacher Guide* - Page 5**