Name _____ Date _____

Unit 11: Home Practice

Part 1 Division Facts

Solve the following problems in your head.

1. Find the number N that makes each sentence true.

   A. $30 \div N = 6$ **B.** $N \div 6 = 7$ **C.** $24 \div 6 = N$ **D.** $36 \div N = 9$

   E. $N \div 8 = 8$ **F.** $16 \div N = 2$ **G.** $21 \div 3 = N$ **H.** $32 \div N = 8$

2. Solve.

   A. $40{,}000 \div 80 =$ **B.** $720 \div 90 =$ **C.** $3600 \div 6 =$ **D.** $270 \div 30 =$

   E. $48{,}000 \div 80 =$ **F.** $2000 \div 5 =$ **G.** $81{,}000 \div 90 =$ **H.** $3500 \div 70 =$

3. Follow the order of operations to solve each of the following.

   A. $5 \times 3 + 14 =$ **B.** $(33 + 7) \times 9 =$ **C.** $45 + 45 \div 9 =$ **D.** $7^2 + 8 \times 3 =$

Part 2 Equivalent Fractions

Find n to make each pair of fractions equivalent. Use the *Finding Equivalent Fractions and Ratios Menu* in the *Student Guide* Reference section.

A. $\frac{4}{5} = \frac{n}{20}$

B. $\frac{9}{10} = \frac{36}{n}$

C. $\frac{4}{n} = \frac{28}{49}$

D. $\frac{n}{8} = \frac{4}{32}$

E. $\frac{5}{6} = \frac{n}{36}$

F. $\frac{3}{4} = \frac{60}{n}$

Part 3 Computation Practice

Choose a strategy to solve each problem. Use the resources in the *Student Guide* Reference section.

A. $87 \times 62 =$

B. $2.3 \times 52 =$

C. $1892 \div 5 =$

D. $3406 \div 27 =$

E. $4\frac{5}{6} + 3\frac{1}{5} =$

F. $\frac{11}{12} + 1\frac{2}{3} =$

G. $\frac{2}{3} \times 36 =$

H. $\frac{3}{5} \times \frac{5}{6} =$

I. $314.56 + .89 =$

J. $1089.23 - 17.9 =$

K. $58 - .36 =$

L. $173.4 + 38.65 =$

Part 4 Fractions to Decimals

For each pair of numbers write a number sentence using <, >, or =. (Hint: Use a calculator to change the fractions to decimals.)

A. $\frac{1}{6}$ and .30

B. .65 and $\frac{5}{8}$

C. $\frac{4}{9}$ and .46

D. 0.60 and $\frac{3}{5}$

E. 0.43 and $\frac{3}{7}$

F. $\frac{6}{15} = .4$

Part 5 Practice the Operations

Choose a strategy to solve each problem. Use the resources in the *Student Guide* Reference section.

A. $26 \times 73 =$ B. $3478 \div 7 =$ C. $471 \times 60 =$

D. $1823 \div 21 =$ E. $5077 \div 46 =$ F. $67.2 \times 0.6 =$

Try to solve the following in your head without paper and pencil. Explain your strategies for Questions G and I.

G. $14{,}034 + 160 =$ H. $1270 + 330 =$ I. $9099 - 100 =$

J. $0.5 \times 6400 =$ K. $0.10 \times 150 =$ L. $45 + 0.45 =$

M. $13 - 5.5 =$ N. $23 \times 200 =$ O. $1760 - 900 =$

Part 6 **Measuring the Density of Rocks**

You will need a piece of graph paper to complete these questions.

1. On a geology field trip, Blanca found three rocks made of the same type of material. She measured the mass and volume of each rock. Her data table is shown at the right. Plot the data on a piece of graph paper. Put Mass (*M*) on the vertical axis and Volume (*V*) on the horizontal axis. Scale your axes so that *M* goes up to 100 g and *V* goes up to 30 cc.

Rock Density Measurement Data

Rock	Volume (cc)	Mass (g)
A	3	8.5
B	5	15
C	21	60

2. Use a point on the line to find the ratio of mass to volume for this kind of rock.

3. Would you expect the rocks to sink or float in water? Why? Remember, the ratio of mass to volume of water is $\frac{1\,g}{1\,cc}$ (or 1 g/cc).

4. On the field trip, Blanca also found a bigger rock of the same material. This rock is too big to fit in the graduated cylinder. She knows the mass of the rock is 80 grams. Use your graph to find the volume of this rock.

5. A rock made of the same material has a volume of 15 cc. What is its mass? Explain how you found your answer.

6. If a rock made of the same material has a volume of 40 cc, what is its mass? Show your solution strategy.

Part 7 In Proportion

Solve the following problems using pencil and paper or a calculator.

1. David and Felicia both brought chocolate chip cookies for dessert with their lunches.

   A. David counts 14 chips in his two cookies. What is the ratio of chips to cookies in David's lunch?

   B. Felicia counts 35 chips in her 5 cookies. What is the ratio of chips to cookies in Felicia's lunch?

   C. Who has the higher ratio of chocolate chips to cookies? Explain.

2. Notebooks are on sale for 3 for $1.29. Alexis's mother decides to stock up on them.

   A. If she buys nine notebooks, how much will she spend on notebooks?

   B. If she buys ten notebooks, how much will she spend? What does one notebook cost?

3. Candy bars come in packages of 5 for $2.00.

   A. What is the price for 15 candy bars?

   B. Give two different strategies you can use to solve the problem.

4. Arti is mixing some orange paint for the class mural. She mixes 3 squirts of yellow to 2 squirts of red and gets a beautiful orange color. Shannon put 9 squirts of yellow in her bowl. If she wants to get the same orange color as Arti, how many squirts of red should she use?

Teacher Guide

Part 1. Division Facts (TG p. 1)
Questions 1–3

I. **A.** 5   **B.** 42

  C. 4   **D.** 4

  E. 64   **F.** 8

  G. 7   **H.** 4

2. **A.** 500   **B.** 8

  C. 600   **D.** 9

  E. 600   **F.** 400

  G. 900   **H.** 50

3. **A.** 29   **B.** 360

  C. 50   **D.** 73

Part 2. Equivalent Fractions (TG p. 1)
Questions A–F

A. 16   **B.** 40

C. 7   **D.** 1

E. 30   **F.** 80

Part 3. Computation Practice (TG p. 2)
Questions A–L

A. 5394   **B.** 119.6

C. 378 R2   **D.** 126 R4

E. $8\frac{1}{30}$ **F.** $2\frac{7}{12}$

G. 24   **H.** $\frac{1}{2}$

I. 315.45   **J.** 1071.33

k. 57.64   **L.** 212.05

Part 4. Fractions to Decimals (TG p. 2)
Questions A–F

A. $\frac{1}{6} < .30$ **B.** $.65 > \frac{5}{8}$

C. $\frac{4}{9} < .46$ **D.** $.60 = \frac{3}{5}$

E. $.43 > \frac{3}{7}$ **F.** $\frac{6}{15} = .4$

Unit 11: Home Practice

Part 1 Division Facts
Solve the following problems in your head.

I. Find the number *N* that makes each sentence true.
  A. $30 \div N = 6$ **B.** $N \div 6 = 7$ **C.** $24 \div 6 = N$ **D.** $36 \div N = 9$

  E. $N \div 8 = 8$ **F.** $16 \div N = 2$ **G.** $21 \div 3 = N$ **H.** $32 \div N = 8$

2. Solve.
  A. $40,000 \div 80 =$ **B.** $720 \div 90 =$ **C.** $3600 \div 6 =$ **D.** $270 \div 30 =$

  E. $48,000 \div 80 =$ **F.** $2000 \div 5 =$ **G.** $81,000 \div 90 =$ **H.** $3500 \div 70 =$

3. Follow the order of operations to solve each of the following.
  A. $5 \times 3 + 14 =$ **B.** $(33 + 7) \times 9 =$ **C.** $45 + 45 \div 9 =$ **D.** $7^2 + 8 \times 3 =$

Part 2 Equivalent Fractions
Find *n* to make each pair of fractions equivalent. Use the *Finding Equivalent Fractions and Ratios Menu* in the *Student Guide* Reference section.

A. $\frac{4}{5} = \frac{n}{20}$ **B.** $\frac{9}{10} = \frac{36}{n}$ **C.** $\frac{4}{n} = \frac{28}{49}$

D. $\frac{n}{8} = \frac{4}{32}$ **E.** $\frac{5}{6} = \frac{n}{36}$ **F.** $\frac{3}{4} = \frac{60}{n}$

***Teacher Guide* - Page 1**

Part 3 Computation Practice
Choose a strategy to solve each problem. Use the resources in the *Student Guide* Reference section.

A. $87 \times 62 =$ **B.** $2.3 \times 52 =$ **C.** $1892 \div 5 =$

D. $3406 \div 27 =$ **E.** $4\frac{5}{6} + 3\frac{1}{5} =$ **F.** $\frac{11}{12} + 1\frac{2}{3} =$

G. $\frac{2}{3} \times 36 =$ **H.** $\frac{3}{5} \times \frac{5}{6} =$ **I.** $314.56 + .89 =$

J. $1089.23 - 17.9 =$ **K.** $58 - .36 =$ **L.** $173.4 + 38.65 =$

Part 4 Fractions to Decimals
For each pair of numbers write a number sentence using <, >, or =. (Hint: Use a calculator to change the fractions to decimals.)

A. $\frac{1}{6}$ and .30   **B.** .65 and $\frac{5}{8}$ **C.** $\frac{4}{9}$ and .46

D. 0.60 and $\frac{3}{5}$ **E.** 0.43 and $\frac{3}{7}$ **F.** $\frac{6}{15} = .4$

***Teacher Guide* - Page 2**

Name _____ Date _____

Part 5 Practice the Operations
Choose a strategy to solve each problem. Use the resources in the *Student Guide* Reference section.

A. $26 \times 73 =$ B. $3478 \div 7 =$ C. $471 \times 60 =$

D. $1823 \div 21 =$ E. $5077 \div 46 =$ F. $67.2 \times 0.6 =$

Try to solve the following in your head without paper and pencil. Explain your strategies for Questions G and I.

G. $14,034 + 160 =$ H. $1270 + 330 =$ I. $9099 - 100 =$

J. $0.5 \times 6400 =$ K. $0.10 \times 150 =$ L. $45 + 0.45 =$

M. $13 - 5.5 =$ N. $23 \times 200 =$ O. $1760 - 900 =$

3 TG · Grade 5 · Unit 11 · Home Practice

*Teacher Guide* - **Page 3**

Part 5. Practice the Operations (TG p. 3)
Questions A–O

A. 1898

B. 496 R6

C. 28,260

D. 86 R17

E. 110 R17

F. 40.32

G. 14,194; One possible strategy: Adding the hundreds digits and tens digits in your head gives you 14,194.

H. 1600

I. 8999; One possible strategy: 9100 – 100 is 9000 so, 9099 – 100 is one less than 9000 or 8999.

J. 3200

K. 15

L. 45.45

M. 7.5

N. 4600

O. 860

Part 6. Measuring the Density of Rocks (TG p. 4)
Questions 1–6

1.
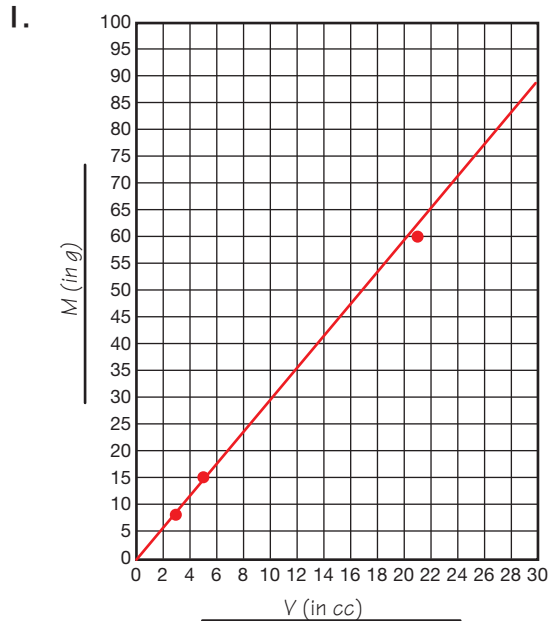
2. Using the point $M = 30$ g and $V = 10$ cc,
Density $= \frac{30 \text{ g}}{10 \text{ cc}} = 3$ g/cc

3. Since the ratio of $\frac{M}{V}$ of the rock is greater than 1, the rocks will sink in water.

4. About 27 cc

5. 45 g; Solution strategies will vary. $\frac{3 \text{ g}}{1 \text{ cc}} = \frac{M}{15 \text{ cc}}$; $M = 3 \text{ g} \times 15 = 45$ g

6. 120 g; Solution strategies will vary. $\frac{3 \text{ g}}{1 \text{ cc}} = \frac{M}{40 \text{ cc}}$; $M = 3 \text{ g} \times 40 = 120$ g

Part 7. In Proportion (TG p. 5)
Questions 1–4

1. A. $\frac{14 \text{ chips}}{2 \text{ cookies}}$ or $\frac{7 \text{ chips}}{1 \text{ cookie}}$

 B. $\frac{35 \text{ chips}}{5 \text{ cookies}}$ or $\frac{7 \text{ chips}}{1 \text{ cookie}}$

 C. They both have the same ratio, since $\frac{14}{2}$ and $\frac{35}{5}$ both reduce to 7 chips per cookie.

2. A. $3.87

 B. $4.30; $0.43

3. A. $6.00

 B. $\frac{5}{\$2.00} = \frac{15}{C}$; $C = \$6.00$

 Since 15 is 5×3, the price for 15 candy bars is $\$2.00 \times 3 = \$6.00$.

4. 6 squirts of red

Teacher Guide - Page 4

Name _____ **Date** _____

Part 6 Measuring the Density of Rocks
You will need a piece of graph paper to complete these questions.

1. On a geology field trip, Blanca found three rocks made of the same type of material. She measured the mass and volume of each rock. Her data table is shown at the right. Plot the data on a piece of graph paper. Put Mass (*M*) on the vertical axis and Volume (*V*) on the horizontal axis. Scale your axes so that *M* goes up to 100 g and *V* goes up to 30 cc.

Rock Density Measurement Data

Rock	Volume (cc)	Mass (g)
A	3	8.5
B	5	15
C	21	60

2. Use a point on the line to find the ratio of mass to volume for this kind of rock.

3. Would you expect the rocks to sink or float in water? Why? Remember, the ratio of mass to volume of water is $\frac{1 \text{ g}}{1 \text{ cc}}$ (or 1 g/cc).

4. On the field trip, Blanca also found a bigger rock of the same material. This rock is too big to fit in the graduated cylinder. She knows the mass of the rock is 80 grams. Use your graph to find the volume of this rock.

5. A rock made of the same material has a volume of 15 cc. What is its mass? Explain how you found your answer.

6. If a rock made of the same material has a volume of 40 cc, what is its mass? Show your solution strategy.

TG · Grade 5 · Unit 11 · Home Practice   **4**

Teacher Guide - Page 5

Name _____ **Date** _____

Part 7 In Proportion
Solve the following problems using pencil and paper or a calculator.

1. David and Felicia both brought chocolate chip cookies for dessert with their lunches.
 A. David counts 14 chips in his two cookies. What is the ratio of chips to cookies in David's lunch?

 B. Felicia counts 35 chips in her 5 cookies. What is the ratio of chips to cookies in Felicia's lunch?

 C. Who has the higher ratio of chocolate chips to cookies? Explain.

2. Notebooks are on sale for 3 for $1.29. Alexis's mother decides to stock up on them.
 A. If she buys nine notebooks, how much will she spend on notebooks?

 B. If she buys ten notebooks, how much will she spend? What does one notebook cost?

3. Candy bars come in packages of 5 for $2.00.
 A. What is the price for 15 candy bars?

 B. Give two different strategies you can use to solve the problem.

4. Arti is mixing some orange paint for the class mural. She mixes 3 squirts of yellow to 2 squirts of red and gets a beautiful orange color. Shannon put 9 squirts of yellow in her bowl. If she wants to get the same orange color as Arti, how many squirts of red should she use?

5 TG · Grade 5 · Unit 11 · Home Practice