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Unit 11: Home Practice

Part 1 Triangle Flash Cards: Last Six Facts

Study for the quiz on the division facts for the last six multiplication facts ($24 \div 6$, $24 \div 4$, $28 \div 4$, $28 \div 7$, $32 \div 8$, $32 \div 4$, $42 \div 7$, $42 \div 6$, $48 \div 8$, $48 \div 6$, $56 \div 8$, $56 \div 7$). Take home your Triangle Flash Cards and your list of facts you need to study.

Ask a family member to choose one flash card at a time. He or she should cover the corner containing either the square or the circle, which will be the answer to a division fact. Solve a division problem with the two uncovered numbers. Repeat with the other small number covered.

Your teacher will tell you when you will have a quiz on the division facts for the last six facts. Study those facts you cannot answer correctly and quickly.

Part 2 Multiples of 10 and 100

Solve the following problems using Nila's method.

Nila solved 25×20 like this:

$25 \times 20 = 25 \times 2$ tens
 25×2 tens = 50 tens
 50 tens = 500

A. $31 \times 40 = 31 \times 4$ tens _____

B. $23 \times 300 = 23 \times 3$ _____

C. $50 \times 11 = 5$ _____ $\times 11$ _____

D. $60 \times 400 = 60 \times 4$ _____

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Part 3 Writing Numbers

For each of the following numbers, write two other numbers: one that is a little smaller and one that is a little larger. Use a number line to help you.

| | A Little Smaller | A Little Larger |
|---------------------|------------------|-----------------|
| A. one million | _____ | _____ |
| B. one-half million | _____ | _____ |
| C. ten million | _____ | _____ |
| D. 1,300,000 | _____ | _____ |
| E. 999,999 | _____ | _____ |
| F. five thousand | _____ | _____ |

Part 4 The Shortcut

Decide if the following are divisible without actually dividing. Tell how you know.

A. Is 5367 divisible by 2?
 B. Is 546,890 divisible by 10?
 C. Is 11,952 divisible by 6, 3, and 2?
 D. Is 74,981 divisible by 9?
 E. Is 431,895 divisible by 5 and 10?
 F. Give a three-digit number that is divisible by 9.
 G. Give a four-digit number that is divisible by 5.
 H. Which answers cannot possibly be the answer for 326×3 ? Fill in the circle with your answers. You can use the divisibility rules to explain your thinking.

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Part 2. Multiples of 10 and 100
 Questions A–D (TG p. 1)

- A. $31 \times 40 = 31 \times 4$ tens
 31×4 tens = 124 tens
 124 tens = 1240
- B. $23 \times 300 = 23 \times 3$ hundreds
 23×3 hundreds = 69 hundreds
 69 hundreds = 69,000
- C. $50 \times 11 = 5$ tens $\times 11$
 5 tens $\times 11 = 55$ tens
 55 tens = 550
- D. $60 \times 400 = 60 \times 4$ hundreds
 60×4 hundreds = 240 hundreds
 240 hundreds = 24,000

Part 3. Writing Numbers
 Questions A–F (TG p. 2)

Answers will vary. One possible response is given for each.

- A. 999,998 and 1,000,002
 B. 499,995 and 500,010
 C. 9,999,999 and 10,000,025
 D. 1,299,990 and 1,300,008
 E. 999,996 and 1,000,003
 F. 4,999 and 5,003

Part 4. The Shortcut
 Questions A–H (TG p. 2)

Strategies will vary for A–E.

- A. No; it is not an even number.
 B. Yes; it ends in a zero.
 C. Yes; it is divisible by 2 because it is even. It is divisible by 3 because the sum of the digits ($1 + 1 + 9 + 5 + 2 = 18$) is a multiple of 3. It is divisible by 6 because it is divisible by both 2 and 3.
 D. No; the sum of the digits is not divisible by 9.
 E. No; it is divisible by 5 since it ends in a 5, but it is not divisible by 10 since it does not end in a 0.
 F. Answers will vary. Any 3-digit number whose digits add to a multiple of 9 is correct.
 G. Answers will vary. Any 4-digit number that ends in 5 or 0 is correct.

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H. Possible response: The only answer divisible by 3 is 978 ($9 + 7 + 8 = 24$; $24 \div 3 = 8$). All other possibilities do not fit the divisibility rules for 3.

Part 5. Addition and Subtraction Practice Questions A–G (TG p. 3)

- A. 157 B. 105 C. 9
D. 4002 E. 1943 F. 328

G. Answers will vary. Ana’s answer is not reasonable. Her estimate should be closer to the exact answer because she used convenient numbers that were close to the real numbers. Ana should go back and check her subtraction. She made an error subtracting the tens.

$818 - 293 = 525$

Part 6. More Multiples of 10 and 100 Questions A–I (TG p. 3)

- A. 560 B. 4200 C. 24,000
D. 480,000 E. 2400 F. 56,000
G. 28,000 H. 32,000 I. 320

Part 7. Multiplication Methods Questions A–D (TG p. 3)

Methods will vary. One example is given for each.

A. 58×26 (Rectangle Method)

| | | | | |
|----|-----------------------|---------------------|---|------|
| | 20 | 6 | | 1000 |
| 50 | $50 \times 20 = 1000$ | $50 \times 6 = 300$ | | 300 |
| 8 | $8 \times 20 = 160$ | $8 \times 6 = 48$ | | 160 |
| | | | + | 1508 |

B. 72×44 (All-Partials)

$$\begin{array}{r}
 72 \\
 \times 44 \\
 \hline
 8 \quad \leftarrow 4 \times 2 \\
 280 \quad \leftarrow 4 \times 70 \\
 80 \quad \leftarrow 40 \times 2 \\
 +2800 \quad \leftarrow 40 \times 70 \\
 \hline
 3168
 \end{array}$$

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Part 5 Addition and Subtraction Practice
Use paper and pencil or mental math only. Estimate to see if your answers are reasonable. Use the *Addition and Subtraction Strategies Menu* in the *Student Guide Reference* section.

A. $\begin{array}{r} 92 \\ + 65 \\ \hline \end{array}$ B. $\begin{array}{r} 340 \\ - 235 \\ \hline \end{array}$ C. $\begin{array}{r} 58 \\ - 49 \\ \hline \end{array}$

D. $\begin{array}{r} 5001 \\ - 999 \\ \hline \end{array}$ E. $\begin{array}{r} 1490 \\ + 453 \\ \hline \end{array}$ F. $\begin{array}{r} 289 \\ + 39 \\ \hline \end{array}$

G. Ana solved $818 - 293$ for homework. Here is her work and her estimate to check for reasonableness. She said, "Now I have finished my work."

| | |
|---|---|
| $\begin{array}{r} 818 \\ - 293 \\ \hline 685 \end{array}$ | $\begin{array}{r} 800 \\ - 300 \\ \hline 500 \end{array}$ |
|---|---|

What would you tell Ana? Is she finished?

Part 6 More Multiples of 10 and 100
Do the following problems in your head. Write only the answers.

A. $7 \times 80 = \underline{\hspace{2cm}}$ B. $70 \times 60 = \underline{\hspace{2cm}}$ C. $60 \times 400 = \underline{\hspace{2cm}}$
D. $600 \times 800 = \underline{\hspace{2cm}}$ E. $40 \times 60 = \underline{\hspace{2cm}}$ F. $70 \times 800 = \underline{\hspace{2cm}}$
G. $40 \times 700 = \underline{\hspace{2cm}}$ H. $40 \times 800 = \underline{\hspace{2cm}}$ I. $8 \times 40 = \underline{\hspace{2cm}}$

Part 7 Multiplication Methods
Solve these problems using the rectangle method, all-partials, or expanded form. Use the *Multidigit Multiplication Strategies Menu* in the *Reference* section of the *Student Guide*.

A. 58×26 B. 72×44
C. 93×65 D. 35×38

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C. 93×65 (Expanded Form)

$$\begin{array}{r}
 93 \quad 90 \times 3 \\
 \times 65 = \underline{60 \times 5} \\
 \hline
 15 \\
 450 \\
 180 \\
 + 5400 \\
 \hline
 6045
 \end{array}$$

D. 35×38 (Rectangle Method)

| | | | | |
|----|----------------------|---------------------|---|------|
| | 30 | 8 | | 900 |
| 30 | $30 \times 30 = 900$ | $30 \times 8 = 240$ | | 240 |
| 5 | $5 \times 30 = 150$ | $5 \times 8 = 40$ | | 150 |
| | | | + | 1330 |

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Part 8 Money

Luis has 3 dimes, 3 nickels, and 3 quarters. Help him find all the possible amounts he can make using 3 of his coins. For example, using 3 dimes, 0 nickels, and 0 quarters, he has \$.30. Using 1 dime, 1 nickel, and 1 quarter, he has \$.40. Show how you organized your work.

Part 9 Big Numbers

- Write the following numbers:
 - six hundred thirty thousand _____
 - one million, four hundred ten thousand, nineteen _____
- Write the following in words. Use the *Writing Numbers in Words* page in the Reference section of the *Student Guide*.
 - 420,079 _____
 - 6,122,038 _____
- Choose from the following numbers to answer Questions 3A and 3B.
46,998 56,888 45,788 48,998 45,088
 - If you add 2 to one of the numbers, you will get 49,000. Which number?

 - If you add 11,100 to one of the numbers, you will get 58,098. Which number?

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Part 10 Gone Fishing

Choose mental math, paper-and-pencil methods, or estimation to solve the following problems. Do your work on this page. If you find an exact answer, estimate to make sure your answer is reasonable. Use the *Multidigit Multiplication Strategies Menu* in the Reference section of the *Student Guide* to help you.

- The state fish hatchery buys fish food in 40 pound bags. Each bag costs \$26. Last year, the fish hatchery bought a total of 73 bags for their fish ponds.
 - How much money did the state fish hatchery pay for fish food last year?
 - How many pounds of fish food did the state fish hatchery buy in all?
- Mr. Dawson's pond has an area of about 38 acres. He stocked his pond with about 50 trout, 50 bluegill, and 50 catfish for every acre. About how many fish did Mr. Dawson put into his pond in all? Show or tell how you arrived at your answer.
- Gorski's Fish Hatchery allows people to catch fish from one of their docks. They allow up to 18 people on the dock during each "Catch-A-Fish-To-Eat" session. Gorski's offers 45 of these fishing sessions per week. What is the largest number of people who could fish from Gorski's dock in one week?

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Part 8. Money (TG p. 4)

| Nickels | Dimes | Quarters | Amounts |
|---------|-------|----------|---------|
| 3 | 0 | 0 | \$.15 |
| 2 | 1 | 0 | \$.20 |
| 2 | 0 | 1 | \$.35 |
| 1 | 2 | 0 | \$.25 |
| 1 | 0 | 2 | \$.55 |
| 1 | 1 | 1 | \$.40 |
| 0 | 3 | 0 | \$.30 |
| 0 | 2 | 1 | \$.45 |
| 0 | 1 | 2 | \$.60 |
| 0 | 0 | 3 | \$.75 |

Part 9. Big Numbers Questions 1–3 (TG p. 4)

- 630,000
 - 1,410,019
- four hundred twenty thousand, seventy-nine
 - six million, one hundred twenty-two thousand, thirty-eight
- 48,998
 - 46,998

Part 10. Gone Fishing Questions 1–3 (TG p. 5)

- \$1898
 - 2920 pounds
- Strategies will vary. One possible answer is a little less than 6000 fish, because $150 \times 40 = 6000$.
- 810 people

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