

# Unit 7: Home Practice

## Part 1 Triangle Flash Cards: Last Six Facts

Study for the quiz on the multiplication and division facts for the last six facts. Take home your Triangle Flash Cards: Last Six Facts ( $4 \times 6$ ,  $4 \times 7$ ,  $4 \times 8$ ,  $6 \times 7$ ,  $6 \times 8$ ,  $7 \times 8$ ) and your list of facts you need to study.

Ask a family member to choose one flash card at a time. To quiz you on a multiplication fact, he or she should cover the corner containing the highest number. (The highest number on each card is slightly shaded.) This number will be the answer to the multiplication fact. Multiply the two uncovered numbers.

To quiz you on a division fact, your family member can cover one of the unshaded numbers. Then use the two uncovered numbers to solve a division fact.

Ask your family member to mix up the multiplication and division facts. He or she should sometimes cover the highest number and sometimes cover one of the smaller numbers.

Your teacher will tell you when the quiz on the last six facts will be.

**Part 2** Review Problems

Solve the following problems. Choose an appropriate method for each: mental math, paper and pencil, or a calculator. Explain your solutions. Use a separate sheet of paper to show your work.

1. Write the number  $3 \times 10^5$  in standard form.
2. What is the value of the 5 in 345,687?
3. Estimate the answers to the following problems.  
A.  $346,000 \times 5$       B.  $251,000 \times 7$       C.  $51,000 \times 5$
4. Jerome's mother is planning to retiling the bathroom floor. The room measures 8 feet by 8 feet. She is planning to use square tiles that measure 6 inches by 6 inches.
  - A. What is the area of the bathroom floor?
  - B. How many tiles will she need? (Hint: Make a drawing.)

**Part 3** Area Problems

Choose an appropriate strategy to solve each problem. Label your answers with appropriate units.

1. Jessie's parents are buying a rug for Jessie's bedroom. Jessie measured the length and width of her bedroom floor. It is 10 feet by 10 feet. If they want to cover the entire floor, what is the area of the rug they should purchase? What shape should the rug be? How did you decide?
2. Arthur made a cake in a rectangular pan that is 13 inches  $\times$  9 inches. He put red icing on half the cake and white icing on the other half, so he had two triangles. What is the area of the red triangle? Explain your thinking.
3. Jerome's grandmother has an 8-inch by 10-inch wedding picture of herself and Jerome's grandfather. Her wedding picture sits next to Jerome's 3-inch by 5-inch school picture. About how many times greater in area is the wedding picture than the school picture. Show or tell how you decided.
4. **A.** Shannon has a dog run in her back yard for her dog. The dog run is a rectangle that is 12 feet by 8 feet. What is the area of her dog run?  
**B.** Nila wants to put the same size dog run in her backyard. Her yard is in the shape of a square with an area of 100 square feet. Will an 8-feet by 12-feet dog run fit in her yard? Explain why or why not.

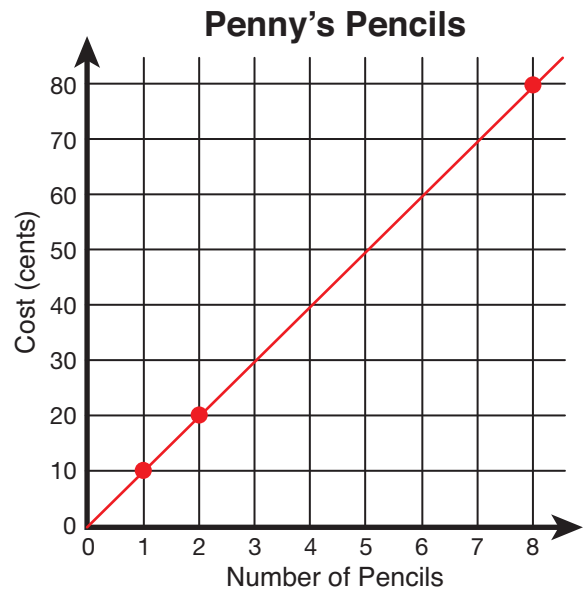
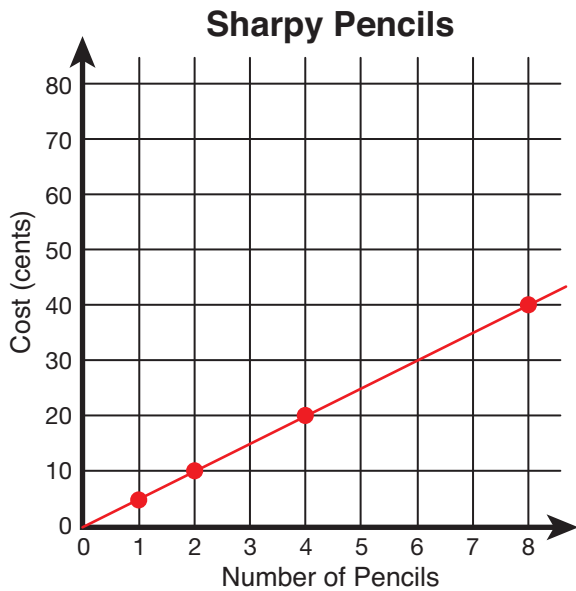
**Part 4** Word Problems

Choose an appropriate strategy to solve each problem. Use the *Multidigit Multiplication Strategies Menu* and the *Division Strategies Menu* in the *Student Guide Reference* section. Use a separate sheet of paper to show your work for each problem.

1. Mighty Tree Tree Farm is having a sale. Seedlings (very young trees) are grouped in bunches of 15 for \$25.00, tax included. Coleman School decided to buy 6 bunches to plant on the school grounds.
  - A. How many seedlings did Coleman School buy?
  - B. How much money did Coleman School spend?
2. Mr. Moreno's class volunteered to plant the seedlings on the school grounds. There are 22 students present in Mr. Moreno's class on planting day. If each student plants about the same number of seedlings, how many seedlings will each student plant?
3. Mighty Tree Tree Farm also sells older trees. They charge \$8.00 per foot in height for older trees, tax included. Jacob's family chooses to buy two trees that are the same height. The total cost is \$128. How tall are the two trees?
4. Once a year, Mighty Tree Tree Farm has a Truckload Bargain Day. On this day, customers pay \$250 and get a truckload of trees. One truckload has 9 trees. Estimate the cost of one tree in this truckload.
5. This year, Mighty Tree Tree Farm sold 32 truckloads at \$250 each. How much money did Mighty Tree Tree Farm take in on this day?
6. Last year, Mighty Tree Tree Farm sold 450 trees on Truckload Bargain Day. If each truckload contains 9 trees, how many truckloads did they sell?

**Part 5 Comparing Prices**

While stocking shelves at her father’s store, Carla compares the prices of two different brands of pencils. She showed the information in the following graphs. Use the graphs to answer the questions below. Use a separate sheet of paper for your explanations.



1. **A.** Write a ratio of cost to the number of pencils for Sharpay Pencils.  
**B.** Write two ratios equal to the ratio in Question 1A.
2. **A.** Write a ratio of cost to number of pencils for Penny’s Pencils.  
**B.** Write two ratios equal to the ratio in Question 2A.
3. Which pencils are more expensive? How do you know?
4. Which line is steeper? Explain why.

**Show as many ways as you can to solve the following problems.**

5. What is the cost of four Sharpay Pencils?
6. How many of Penny’s Pencils can you buy with 60¢?
7. How many Sharpay Pencils can you buy with 60¢?

**Part 6** Multiplication and Division Practice

Choose an appropriate strategy to solve each problem. Use the *Multidigit Multiplication Strategies Menu* and the *Division Strategies Menu* in the *Student Guide Reference* section.

A.  $49 \times 9 =$       B.  $135 \div 6 =$       C.  $18 \times 45 =$       D.  $1064 \div 4 =$

E.  $22 \times 76 =$       F.  $2834 \div 3 =$       G.  $8505 \div 7 =$       H.  $1063 \times 3 =$

I.  $1894 \times 4 =$       J.  $7720 \div 8 =$       K.  $2460 \times 6 =$       L.  $8070 \div 5 =$

M. Explain a mental math strategy for solving Question A.

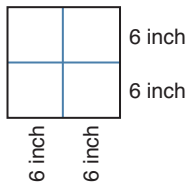
N. Explain how you estimated to see if your answer to Question J is reasonable.

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Part 2. Review Problems (TG p. 2)  
Questions 1–4

1. 300,000
2. 5 thousand, or 5000
3. Answers may vary. One possible response is given for each,
  - A. 1,500,000
  - B. 1,750,000
  - C. 250,000
4. A. 64 square feet

- B. 256 tiles  
4 tiles = 1 sq. ft.  
 $4 \times 64 = 256$



Part 3. Area Problems (TG p. 3)  
Questions 1–4

1. 100 square feet; Since both the length and width are the same length the rug should be a square.
2.  $58\frac{1}{2}$  square inches. The area of the whole cake is  $9 \times 13 = 117$  square inches. Since one half has red icing and one half has white icing, the area of the red icing is  $\frac{1}{2}$  of 117 or  $58\frac{1}{2}$  square inches.
3. It is about 5 times larger. Possible response: The wedding picture has an area of  $8 \text{ in.} \times 10 \text{ in.} = 80$  square inches. The area of the school photo is  $3 \text{ in.} \times 5 \text{ in.} = 15$  square inches.  $15 \times 5 = 75$  which is close to 80, so the wedding photo is about 5 times larger.
4. A. 96 square feet  
B. No, the dog run won't fit because Nila's backyard is a 10-foot by 10-foot square, so the 12 foot side will not fit.

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Part 2 Review Problems

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  - A. What is the area of the bathroom floor?
  - B. How many tiles will she need? (Hint: Make a drawing.)

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Part 3 Area Problems

Choose an appropriate strategy to solve each problem. Label your answers with appropriate units.

1. Jessie's parents are buying a rug for Jessie's bedroom. Jessie measured the length and width of her bedroom floor. It is 10 feet by 10 feet. If they want to cover the entire floor, what is the area of the rug they should purchase? What shape should the rug be? How did you decide?
2. Arthur made a cake in a rectangular pan that is 13 inches  $\times$  9 inches. He put red icing on half the cake and white icing on the other half, so he had two triangles. What is the area of the red triangle? Explain your thinking.
3. Jerome's grandmother has an 8-inch by 10-inch wedding picture of herself and Jerome's grandfather. Her wedding picture sits next to Jerome's 3-inch by 5-inch school picture. About how many times greater in area is the wedding picture than the school picture. Show or tell how you decided.
4. A. Shannon has a dog run in her back yard for her dog. The dog run is a rectangle that is 12 feet by 8 feet. What is the area of her dog run?  
B. Nila wants to put the same size dog run in her backyard. Her yard is in the shape of a square with an area of 100 square feet. Will an 8-foot by 12-foot dog run fit in her yard? Explain why or why not.

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**Part 4 Word Problems**

Choose an appropriate strategy to solve each problem. Use the *Multidigit Multiplication Strategies Menu* and the *Division Strategies Menu* in the *Student Guide Reference* section. Use a separate sheet of paper to show your work for each problem.

- Mighty Tree Tree Farm is having a sale. Seedlings (very young trees) are grouped in bunches of 15 for \$25.00, tax included. Coleman School decided to buy 6 bunches to plant on the school grounds.
  - How many seedlings did Coleman School buy?
  - How much money did Coleman School spend?
- Mr. Moreno's class volunteered to plant the seedlings on the school grounds. There are 22 students present in Mr. Moreno's class on planting day. If each student plants about the same number of seedlings, how many seedlings will each student plant?
- Mighty Tree Tree Farm also sells older trees. They charge \$8.00 per foot in height for older trees, tax included. Jacob's family chooses to buy two trees that are the same height. The total cost is \$128. How tall are the two trees?
- Once a year, Mighty Tree Tree Farm has a Truckload Bargain Day. On this day, customers pay \$250 and get a truckload of trees. One truckload has 9 trees. Estimate the cost of one tree in this truckload.
- This year, Mighty Tree Tree Farm sold 32 truckloads at \$250 each. How much money did Mighty Tree Tree Farm take in on this day?
- Last year, Mighty Tree Tree Farm sold 450 trees on Truckload Bargain Day. If each truckload contains 9 trees, how many truckloads did they sell?

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**Part 5 Comparing Prices**

While stocking shelves at her father's store, Carla compares the prices of two different brands of pencils. She showed the information in the following graphs. Use the graphs to answer the questions below. Use a separate sheet of paper for your explanations.

**Sharp Pencils**

**Penny's Pencils**

- Write a ratio of cost to the number of pencils for Sharp Pencils.
  - Write two ratios equal to the ratio in Question 1A.
- Write a ratio of cost to number of pencils for Penny's Pencils.
  - Write two ratios equal to the ratio in Question 2A.
- Which pencils are more expensive? How do you know?
- Which line is steeper? Explain why.

Show as many ways as you can to solve the following problems.

- What is the cost of four Sharp Pencils?
- How many of Penny's Pencils can you buy with 60¢?
- How many Sharp Pencils can you buy with 60¢?

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**Part 4. Word Problems (TG p. 4)**  
**Questions 1–6**

- 90 seedlings
  - \$150.00
- 4 seedlings each with 2 left over
- 8 feet each
- About \$25;  $\$250 \div 10 = \$25$
- \$8000
- 50 truckloads

**Part 5. Comparing Prices (TG p. 5)**  
**Questions 1–7**

- Answers will vary. One possible ratio is  $\frac{10¢}{2 \text{ pencils}}$ .
  - $\frac{20¢}{4 \text{ pencils}}$ ,  $\frac{25¢}{5 \text{ pencils}}$
- Answers will vary. One possible ratio is  $\frac{10¢}{1 \text{ pencil}}$ .
  - $\frac{20¢}{2 \text{ pencils}}$ ,  $\frac{30¢}{3 \text{ pencils}}$
- Penny's Pencils. One pencil cost 10¢ for Penny Pencils while 2 pencils cost 10¢ for Sharp Pencils.
- Penny's Pencils; They cost more per pencil so the cost increase faster.
- 20¢; Solution strategies will vary. Students might use the graph or use ratios:  $\frac{10¢}{2 \text{ pencils}}$ ,  $\frac{20¢}{4 \text{ pencils}}$ .
- 6 pencils; Solution strategies will vary. Students might use the graph or use ratios.
- 12 pencils; Solution strategies will vary. Students might use ratios:  $\frac{30¢}{6 \text{ pencils}} = \frac{60¢}{12 \text{ pencils}}$ .

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**Part 6. Multiplication and Division Practice**  
**(TG p. 6)**  
**Questions A–N**

- A. 441                      B. 22 R3                      C. 810
- D. 266                      E. 1672                      F. 944 R2
- G. 1215                     H. 3189                      I. 7576
- J. 965                        K. 14,760                    L. 1614
- M. Possible response: I multiplied  $50 \times 9 = 450$ .  
Then I subtracted  $450 - 9 = 441$ .
- N. Possible response: I divided  $8000 \div 8 = 1000$ .  
Since 1000 is close to 965, I know my answer  
is reasonable.

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**Part 6** Multiplication and Division Practice

Choose an appropriate strategy to solve each problem. Use the *Multidigit Multiplication Strategies Menu* and the *Division Strategies Menu* in the *Student Guide Reference* section.

A.  $49 \times 9 =$     B.  $135 \div 6 =$     C.  $18 \times 45 =$     D.  $1064 \div 4 =$

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I.  $1894 \times 4 =$     J.  $7720 \div 8 =$     K.  $2460 \times 6 =$     L.  $8070 \div 5 =$

M. Explain a mental math strategy for solving Question A.

N. Explain how you estimated to see if your answer to Question J is reasonable.

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