

Name _____

Date _____

Mental Math: Multiply Multiples of 10, 100, and 1,000

Use basic facts and patterns to find each product.

<p>Example</p> <p>$2 \times 70 = 140$</p>

1. 4×70

2. 3×90

3. 7×30

4. 5×50

5. 2×300

6. 4×200

7. 5×300

8. 6×400

9. 7×500

10. 3×900

11. $2 \times 2,000$

12. $3 \times 3,000$

13. $5 \times 2,000$

14. $4 \times 7,000$

15. $6 \times 3,000$

16. $5 \times 4,000$

17. $7 \times 6,000$

18. $6 \times 6,000$

19. $7 \times 7,000$

Problem Solving • Reasoning

- 20.** Barbara ordered 500 programs for the play. Mrs. Link told her that they would need 3 times that amount. How many programs did they need for the play?
- _____

- 21.** The Village library owns 6,000 books. The County Library owns 5 times that number of books. How many books does the County Library own?
- _____

Name _____

Date _____

Modeling Multiplication by One-Digit Numbers

Tell what multiplication sentence is shown by the blocks.

Example

$2 \times 18 = 36$

1.

2.

3.

4.

5.

Use base-ten blocks to find each product.

6. 3×17 _____

7. 2×23 _____

8. 3×35 _____

9. 4×16 _____

10. 4×27 _____

11. 5×16 _____

12. 3×24 _____

13. 5×27 _____

14. 2×16 _____

15. 4×22 _____

16. 2×34 _____

17. 5×26 _____

18. **Write About It** How could you use addition to find the product 4×33 ?

19. **Write About It** Which is greater, the product of 3 and 26 or the product of 2 and 36? Explain how you can tell without multiplying.

Name _____

Date _____

Multiply Two-Digit Numbers by One-Digit Numbers

Multiply.

Example

$$\begin{array}{r} 32 \\ \times 3 \\ \hline 96 \end{array}$$

1. $\begin{array}{r} 21 \\ \times 4 \\ \hline \end{array}$

2. $\begin{array}{r} 42 \\ \times 4 \\ \hline \end{array}$

3. $\begin{array}{r} 15 \\ \times 5 \\ \hline \end{array}$

4. $\begin{array}{r} 12 \\ \times 3 \\ \hline \end{array}$

5. $\begin{array}{r} 33 \\ \times 3 \\ \hline \end{array}$

6. $\begin{array}{r} 25 \\ \times 3 \\ \hline \end{array}$

7. $\begin{array}{r} 61 \\ \times 4 \\ \hline \end{array}$

8. $\begin{array}{r} 54 \\ \times 7 \\ \hline \end{array}$

9. $\begin{array}{r} 48 \\ \times 3 \\ \hline \end{array}$

10. $\begin{array}{r} 73 \\ \times 3 \\ \hline \end{array}$

11. $\begin{array}{r} 85 \\ \times 3 \\ \hline \end{array}$

12. $\begin{array}{r} 16 \\ \times 7 \\ \hline \end{array}$

13. $\begin{array}{r} 19 \\ \times 3 \\ \hline \end{array}$

14. $\begin{array}{r} 65 \\ \times 7 \\ \hline \end{array}$

15. $\begin{array}{r} 91 \\ \times 4 \\ \hline \end{array}$

16. $\begin{array}{r} 88 \\ \times 6 \\ \hline \end{array}$

17. $\begin{array}{r} 57 \\ \times 7 \\ \hline \end{array}$

18. 39×6

19. 43×5

20. 28×7

21. 66×9

22. 45×3

23. 82×8

Problem Solving • Reasoning

24. Tom is packing plastic tubs of fruit into cartons. Each carton holds 36 tubs of fruit. Tom needs to pack a total of 8 cartons before lunch. How many tubs of fruit will Tom pack?

25. Will has a bookcase with 6 shelves. He has 27 books on each shelf. How many books does Will's bookcase hold?

Name _____

Date _____

Estimate Products

Estimate each product.

Example

$$\begin{array}{r} 33 \\ \times 3 \\ \hline 99 \end{array}$$

1.
$$\begin{array}{r} 29 \\ \times 5 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 78 \\ \times 2 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 52 \\ \times 4 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 435 \\ \times 4 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 89 \\ \times 8 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 187 \\ \times 7 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 623 \\ \times 8 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 739 \\ \times 8 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 2,005 \\ \times 4 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 3,891 \\ \times 6 \\ \hline \end{array}$$

11.
$$\begin{array}{r} \$8.21 \\ \times 5 \\ \hline \end{array}$$

12. 38×3

13. 6×52

14. 28×9

15. $5 \times \$41.59$

16. 8×393

17. 769×8

18. $4,946 \times 6$

19. $\$99.98 \times 7$

Problem Solving • Reasoning

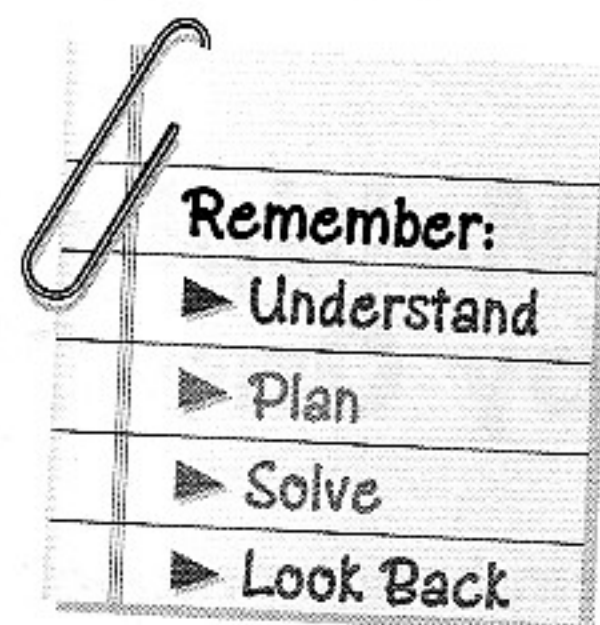
- 20.** At the hobby shop, Bill sold 46 models on Friday. On Saturday he sold about twice as many as he did on Friday. How many models did Bill sell on Saturday?
- _____

- 21.** Betsy has 582 stamps in her collection. Lionel has 3 times as many stamps in his collection. About how many stamps does Lionel have?
- _____

Name _____

Date _____

Problem-Solving Strategy: Find a Pattern



Use a pattern to solve these problems.

1. Mr. Evers's math class has a contest to solve the problem of the week. Bob won this week when he predicted the next two numbers in this pattern.

4 6 12 14 28 30

Think:

How do I get from the first number to the second? How do I get from the second number to the third?

3. Three weeks ago, no one solved the problem of the week. Can you? Here it is. Predict the next two numbers in this pattern.

7 4 8 5 10 7 14

2. Joan won the math contest last week when she found the solution to this problem. Predict the next two numbers after the first seven.

3 8 6 11 9 14 12

Think:

How do I get from the first number to the second? How do I get from the second number to the third?

4. The problem for next week is to predict the next two numbers in the following pattern. What numbers do you predict?

1 2 4 5 7 8 10

Solve. Use these and other strategies.

Problem-Solving Strategies

• Write an Equation

• Use Logical Thinking

• Guess and Check

• Draw a Picture

5. In 1999, there were 6,273 people living in Baytown. When the Census counted the residents of Baytown in 2000, there were 354 more people. How many people were living in Baytown in 2000?

6. Julio went to the hobby store and bought a model for \$6.98. He also bought some new paint so that he could paint the model when it was done. The paint cost \$2.50. How much did Julio spend at the hobby store?

Name _____

Date _____

Multiply Three-Digit Numbers by One-Digit Numbers

Find each product. Estimate to check.

Example

$$\begin{array}{r} 227 \\ \times 3 \\ \hline 681; \\ 700 \end{array}$$

1. $\begin{array}{r} 327 \\ \times 2 \\ \hline \end{array}$

2. $\begin{array}{r} \$1.92 \\ \times 4 \\ \hline \end{array}$

3. $\begin{array}{r} 415 \\ \times 4 \\ \hline \end{array}$

4. $\begin{array}{r} 631 \\ \times 5 \\ \hline \end{array}$

5. $\begin{array}{r} 792 \\ \times 3 \\ \hline \end{array}$

6. $\begin{array}{r} \$1.81 \\ \times 7 \\ \hline \end{array}$

7. $\begin{array}{r} 798 \\ \times 2 \\ \hline \end{array}$

8. $\begin{array}{r} \$6.19 \\ \times 5 \\ \hline \end{array}$

9. $\begin{array}{r} 221 \\ \times 9 \\ \hline \end{array}$

10. $\begin{array}{r} 633 \\ \times 8 \\ \hline \end{array}$

11. $\begin{array}{r} 247 \\ \times 6 \\ \hline \end{array}$

12. 818×3

13. 428×4

14. $\$2.73 \times 3$

15. 893×2

16. 172×4

17. 647×7

18. 384×8

19. 181×9

20. $\$5.61 \times 6$

21. 782×5

Problem Solving • Reasoning

22. Bob finished building 178 birdhouses in one month. If he worked at the same rate, how many birdhouses would Bob finish in 7 months? First solve the problem. Estimate to check.

23. Jill's team of workers can pack 428 cartons of green beans every day. How many cartons can they pack in 5 working days? First solve the problem. Estimate to check.

Name _____

Date _____

Multiply Greater Numbers

Find each product. Estimate to check.

Example

$$\begin{array}{r} 1,917 \\ \times 4 \\ \hline 7,668; \\ 8,000 \end{array}$$

1.
$$\begin{array}{r} 2,268 \\ \times 2 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 2,881 \\ \times 6 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 3,112 \\ \times 5 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 4,189 \\ \times 3 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 4,396 \\ \times 5 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 2,492 \\ \times 7 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 5,382 \\ \times 3 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 8,114 \\ \times 9 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 7,489 \\ \times 8 \\ \hline \end{array}$$

10. $1,399 \times 2$ **11.** $3,962 \times 2$ **12.** $5,311 \times 8$ **13.** $4,292 \times 6$ **14.** $7,129 \times 7$

Problem Solving • Reasoning

- 15.** Joe visits his friend Sam 3 times every year. It is 1,176 miles one way from Joe's house to Sam's. How many miles does Joe travel in a year in the three round trips to Sam's?

- 16.** The Jolly Cereal company produces 6,743 box of Yummies breakfast cereal every week. How many boxes of Yummies do they produce every in 9 weeks?

Name _____ Date _____

Multiply With Zeros

Multiply. Estimate to check.

Example

$$\begin{array}{r} 206 \\ \times 2 \\ \hline 412; 400 \end{array}$$

1.
$$\begin{array}{r} 108 \\ \times 5 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 504 \\ \times 8 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 308 \\ \times 7 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 409 \\ \times 3 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 1,067 \\ \times 4 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 2,308 \\ \times 9 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 5,008 \\ \times 6 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 7,025 \\ \times 7 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 4,038 \\ \times 8 \\ \hline \end{array}$$

10. 307×5

11. $8,106 \times 3$

12. $9,003 \times 8$

13. $5,308 \times 5$

14. $6,098 \times 7$

Problem Solving • Reasoning

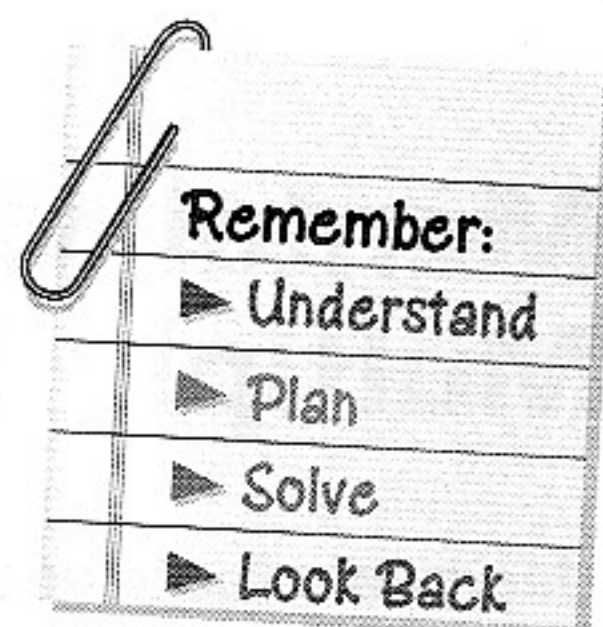
- 15.** The course of the Shine Overland Bike Race is 306 miles long. The bicyclists travel the course 4 times to complete the Quad Trophy Race. How many miles do they complete for this race?
- _____

- 16.** This year, 8,019 people came to the last State University basketball game. The same number of people come to each of the next 5 games. What is the total number of people who attended the 5 games?
- _____

Name _____

Date _____

Problem-Solving Skill: Choose the Operation



Decide which operation to use to solve these problems.

Beth and Suzanne are giving a surprise birthday party for Karen. There will be 21 people at the party altogether. Lasagna and salad will be served with lemonade as the beverage. The guests will sit at 3 tables, each of which will have 2 large and 3 small candles in its center.

1. Beth and Suzanne plan for the same number of people to sit at each table. How many guests will sit at one table?

Think:

What operation will tell the number of equal groups?

2. Paper plates for the cake come in packages of 8. How many packages of plates will Beth have to buy?

Think:

Do I need to find a part of an amount or a total amount?

3. Suzanne cuts the lasagna so that there are 4 rows of pieces with 6 pieces in each row. How many pieces of lasagna are there? Will there be enough for everyone to have at least one piece?

4. There are 50 cups of lemonade. One serving equals 1 cup. Each guest has one serving. Fifteen guests have a second serving. How many cups of lemonade are left?

Solve. Use these and other strategies.

Problem-Solving Strategies

• Write an Equation

• Guess and Check

• Draw a Picture

• Work Backward

5. Beth, Suzanne, Margie, and Diane share the cost of a birthday gift for Karen. They give her 5 books and a reading light. Each book costs \$14.95 and the reading light costs \$10.25. What is the total price of the gift to Karen?

6. Three of the small candles for the tables are accidentally dropped and broken. Suzanne has enough to replace them before the party begins. How many candles were used in all?

Name _____ Date _____

Mental Math: Multiply Multiples of 10 and 100

Use basic facts and patterns to find each product.

Example

$$\begin{array}{r} 40 \\ \times 2 \\ \hline 80 \end{array}$$

1. $\begin{array}{r} 40 \\ \times 20 \\ \hline \end{array}$

2. $\begin{array}{r} 400 \\ \times 20 \\ \hline \end{array}$

3. $\begin{array}{r} 200 \\ \times 40 \\ \hline \end{array}$

4. $\begin{array}{r} 700 \\ \times 60 \\ \hline \end{array}$

5. $\begin{array}{r} 50 \\ \times 50 \\ \hline \end{array}$

6. $\begin{array}{r} 500 \\ \times 50 \\ \hline \end{array}$

7. $\begin{array}{r} 80 \\ \times 90 \\ \hline \end{array}$

8. $\begin{array}{r} 300 \\ \times 60 \\ \hline \end{array}$

9. $\begin{array}{r} 900 \\ \times 40 \\ \hline \end{array}$

10. 80×50

11. 30×70

12. 40×800

13. 500×60

14. 40×40

15. 50×70

16. 20×600

17. 90×600

Problem Solving • Reasoning

18. Beagle puppies cost \$40 at Animal Fair. This month 30 beagle puppies will be sold. What was the total cost of these puppies?

19. Joan saves \$300 each month from her lawn mowing business. If she continues to save the same amount for 30 months, how much will she save?

Name _____ Date _____

Multiply Two 2-Digit Numbers

Multiply.

Example

$$\begin{array}{r} 32 \\ \times 17 \\ \hline 544 \end{array}$$

$$1. \quad \begin{array}{r} 82 \\ \times 23 \\ \hline \end{array}$$

$$2. \quad \begin{array}{r} 59 \\ \times 31 \\ \hline \end{array}$$

$$3. \quad \begin{array}{r} 74 \\ \times 28 \\ \hline \end{array}$$

$$4. \quad \begin{array}{r} 63 \\ \times 47 \\ \hline \end{array}$$

$$5. \quad 18 \times 12$$

$$6. \quad 24 \times 39$$

$$7. \quad 17 \times 71$$

$$8. \quad 32 \times 68$$

$$9. \quad 83 \times 56$$

Multiply. Use the Associative Property.

$$\begin{aligned} 10. \quad 16 \times 40 &= 16 \times (\underline{\quad} \times 10) \\ &= (\underline{\quad} \times 4) \times \underline{\quad} \\ &= \underline{\quad} \times \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} 11. \quad 48 \times 50 &= 48 \times (\underline{\quad} \times 10) \\ &= (\underline{\quad} \times \underline{\quad}) \times \underline{\quad} \\ &= \underline{\quad} \times \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} 12. \quad 33 \times 80 &= 33 \times (\underline{\quad} \times \underline{\quad}) \\ &= (\underline{\quad} \times 8) \times \underline{\quad} \\ &= \underline{\quad} \times 10 \\ &= \underline{\quad} \end{aligned}$$

$$\begin{aligned} 13. \quad 72 \times 90 &= \underline{\quad} \times (\underline{\quad} \times 10) \\ &= (\underline{\quad} \times \underline{\quad}) \times \underline{\quad} \\ &= \underline{\quad} \times \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

Problem Solving • Reasoning

14. There are 15 videos on each shelf in the video section of the library. There are 25 video shelves. How many videos are there in all?

15. Dennis sells 47 computers each month. If Dennis sells the same number of computers each month, how many computers will he sell in one year?

Name _____

Date _____

Multiply Three-Digit Numbers by Two-Digit Numbers

Find each product.

Example

$$\begin{array}{r} 123 \\ \times 50 \\ \hline 6,150 \end{array}$$

$$1. \quad \begin{array}{r} 171 \\ \times 13 \\ \hline \end{array}$$

$$2. \quad \begin{array}{r} 215 \\ \times 28 \\ \hline \end{array}$$

$$3. \quad \begin{array}{r} 422 \\ \times 34 \\ \hline \end{array}$$

$$4. \quad \begin{array}{r} 391 \\ \times 72 \\ \hline \end{array}$$

$$5. \quad \begin{array}{r} 520 \\ \times 40 \\ \hline \end{array}$$

$$6. \quad \begin{array}{r} 208 \\ \times 63 \\ \hline \end{array}$$

$$7. \quad \begin{array}{r} 647 \\ \times 71 \\ \hline \end{array}$$

$$8. \quad \begin{array}{r} 812 \\ \times 21 \\ \hline \end{array}$$

$$9. \quad \begin{array}{r} 759 \\ \times 53 \\ \hline \end{array}$$

$$10. \quad 60 \times 117$$

$$11. \quad 75 \times 539$$

$$12. \quad 38 \times 904$$

$$13. \quad 52 \times 488$$

$$14. \quad 438 \times 16$$

$$15. \quad 57 \times 703$$

$$16. \quad 369 \times 18$$

$$17. \quad 70 \times 219$$

Problem Solving • Reasoning

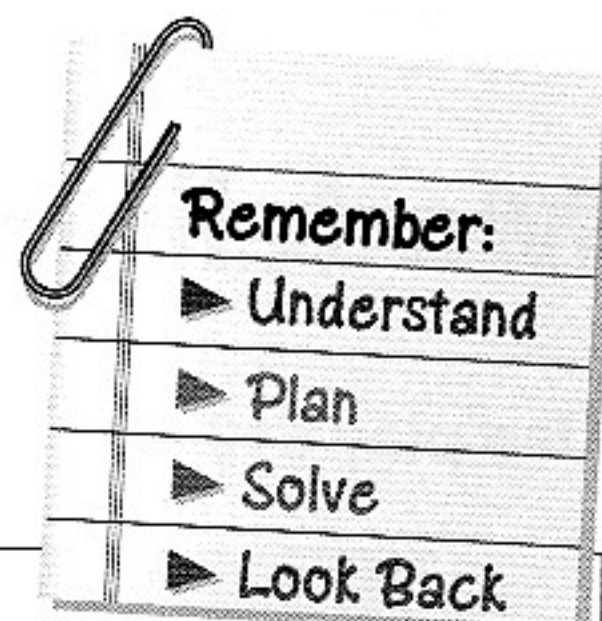
18. Sue's Tomato Farm produces 825 pounds of tomatoes each week of the tomato season. The season is 12 weeks long. How many pounds of tomatoes does the farm produce in the season?

19. The Posh Dress Factory makes 375 dresses each month. How many dresses are made in 3 years?

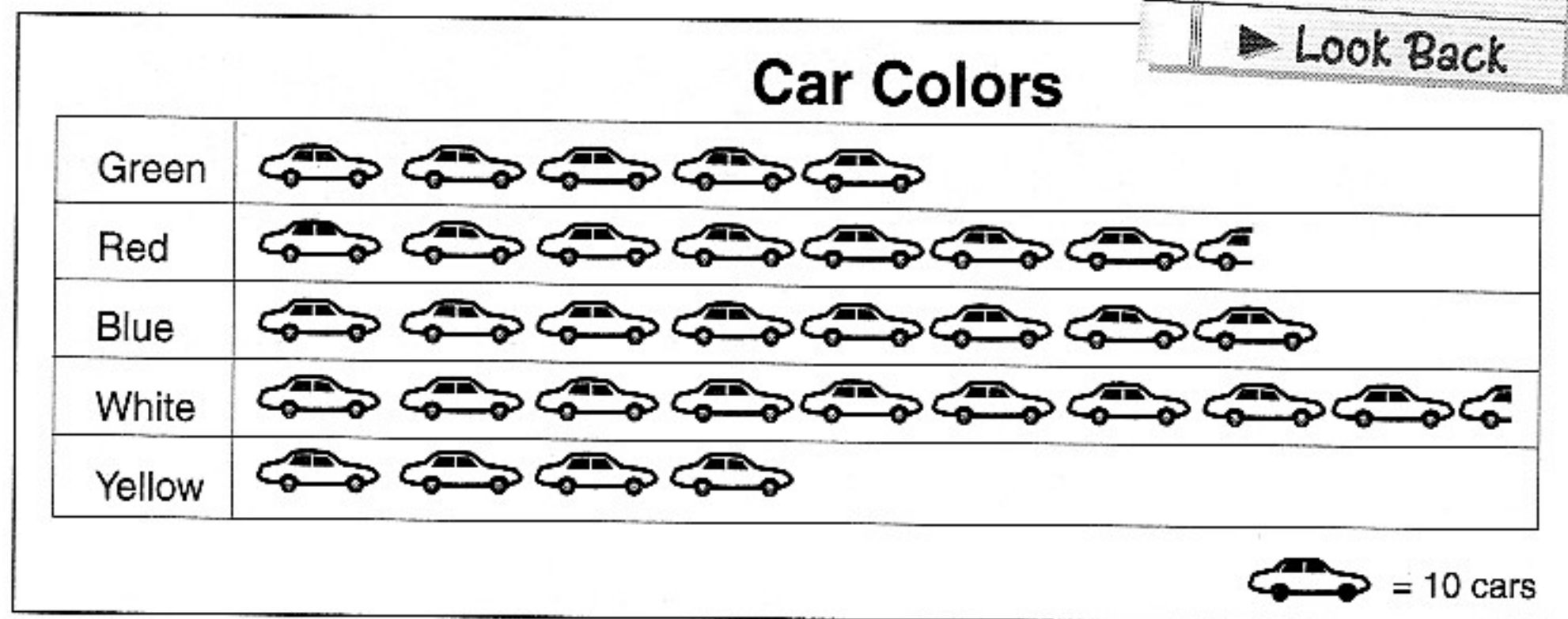
Name _____

Date _____

Problem-Solving Application: Use a Pictograph




Abby was going with her family to visit her grandmother. To pass the time on the drive, Abby counted the colors of passing cars. The pictograph to the right represents the results of Abby's counting.




1. How many blue cars did Abby count?

Think:

How do the number of  help me solve this problem?

2. How many more red cars than green cars did Abby count?

Think:

How many cars does a half of a  represent?

3. For which color did Abby count 95 cars?

4. How many cars did Abby count in all?

Solve. Use these and other strategies.

Problem-Solving Strategies

• Use Logical Thinking

• Write an Equation

• Draw a Picture

• Find a Pattern

5. Janice and Mary have \$65 total to spend on gift for their mother. Mary has \$7 more than Janice does. How much money does each have?

6. Paul is washing the windows of an office building. There are 6 floors. The first floor has 22 windows. Each of the other floors has 25 windows. How many windows does Paul wash in all?