

Using Patterns to Divide

In 1 through 4, find each quotient. Use mental math.

- $360 \div 40 = 36 \text{ tens} \div 4 \text{ tens} =$ _____
- $5,400 \div 90 = 540 \text{ tens} \div 9 \text{ tens} =$ _____
- $240 \div 30 = 24 \text{ tens} \div 3 \text{ tens} =$ _____
- $4,800 \div 10 = 480 \text{ tens} \div 1 \text{ ten} =$ _____

Use mental math to answer the following questions.

- If the vehicles are divided evenly among the sections, how many vehicles are in each section?

Dealership Vehicle Storage	
Sections of vehicles	4
Vehicles for sale	1,200
Rows per section	10

- If the vehicles are divided evenly among the rows in each section, how many vehicles are in each row?

- Estimation** Suppose there are 297 students going on a field trip. If each schoolbus can carry 58 students, estimate the number of buses that will be needed to transport all the students.

- Algebra** If $160,000 \div n = 4$, what is the value of n ?

A 40 B 400 C 4,000 D 40,000

- Explain It** Solve the equation $n \times 50 = 5,000$. Explain your solution.

Estimating Quotients with 2-Digit Divisors

In 1 through 4, estimate the quotients using compatible numbers.

1. $566 \div 81 =$ _____

2. $453 \div 93 =$ _____

3. $1,423 \div 69 =$ _____

4. $8,631 \div 10 =$ _____

5. **Reasoning** If you use $\$99.00 \div 11$ to estimate $\$98.69 \div 11$, is $\$9.00$ greater than or less than the exact answer? Explain.

6. Suppose there are 19 students in a class. A teacher has 122 pencils and passes them out to the class. Estimate the number of pencils each student will receive.

7. At a department store, a package of 12 handkerchiefs costs \$58.99. Estimate how much each handkerchief costs.

8. **Number Sense** Which is the closest estimate for $2,130 \div 33$?

A 7

B 17

C 70

D 700

9. **Explain It** Explain how to estimate $498 \div 12$.

Problem Solving: Multiple-Step Problems

Write and answer the hidden question. Then solve.

1. Glorña talked on her cell phone for 320 minutes the first month, 243 minutes the second month, and 489 minutes the third month. Her payment package does not allow her to pay per minute; she can only buy packages. If she has to pay \$25 for every 200 minutes, how much did she pay for the first three months?

2. Each can of paint will cover 450 tiles. Augustin is painting 300 tiles in his bathroom, 675 in his kitchen, and 100 in his hallway. How many cans of paint does he need to buy?

3. **Number Sense** The sum of three different numbers is 18. If every number is a prime number, what are the three numbers?

4. **Explain It** You earn \$3 an hour as a waitress. After working 3 hours, you earn \$12, \$5, and \$7 in tips. How much money did you earn in total? Explain how you found your answer.

Name _____

Dividing by Multiples of 10

In 1 through 6, divide.

1. $20\overline{)467}$

2. $40\overline{)321}$

3. $80\overline{)813}$

4. $40\overline{)284}$

5. $90\overline{)648}$

6. $10\overline{)587}$

7. To drive from New York City, NY, to Los Angeles, CA, you must drive about 2,779 miles. If you drive 60 miles per hour without stopping, about how many hours do you have to drive? _____

8. **Reasoning** Suppose one bottle of paint can cover 20 tiles. You have 348 tiles. How many bottles of paint do you need to buy to cover all 348 tiles? Explain.

9. A group of 483 students is taking a field trip. One bus is needed for every 50 students. How many buses are needed?

10. **Geometry** A decagon is a ten-sided figure. If a decagon has a perimeter of 114 centimeters, how long is each side of the figure?

A 11.4 cm

B 14 cm

C 114 cm

D 124 cm

11. **Explain It** To figure out how many hours it will take to drive from his home to his cousin's house, a student divides 289 by 60 and estimates that it will take about 4.5 hours. Explain whether you think this is a reasonable estimate.

Name _____

Practice

5-5

1-Digit Quotients

In 1 through 6, find each quotient.

1. $37 \overline{)120}$

2. $39 \overline{)342}$

3. $62 \overline{)338}$

4. $42 \overline{)284}$

5. $82 \overline{)599}$

6. $55 \overline{)474}$

7. Solomon has \$118. He wants to purchase concert tickets for himself and 5 friends. Each ticket costs \$19. Does he have enough money? Explain.

8. **Number Sense** Which problem will have the greater quotient, $376.0 \div 93$ OR $376 \div 93.01$? Explain how you know.

9. Which is $458 \div 73$?

A 5 R19

B 5 R20

C 6 R19

D 6 R20

10. **Explain It** A student solves the problem $354 \div 24$. The student finds an answer of 13 R40. Explain how you can tell that the answer is incorrect just by looking at the remainder.

2-Digit Quotients

In 1 through 6, find each quotient.

1. $14\overline{)413}$

2. $29\overline{)634}$

3. $35\overline{)768}$

4. $19\overline{)401}$

5. $45\overline{)942}$

6. $26\overline{)503}$

7. **Reasoning** The school student council sponsored a Switch Day where students were able to switch classes every 20 minutes. The students are in school for 7 hours. If a student switched as often as possible, how many times did that student get to visit another classroom? (Hint: There are 60 minutes in 1 hour.)
- _____

8. 456 students participated in Switch Day. The students raised money for charity so that the principal would approve of the day. If the total amount of money raised was \$912, and each student brought in the same amount of money, how much did each student raise?
- _____

9. **Estimation** The total dinner bill at a buffet came out to \$589 for 31 people. About how much was the buffet cost per person?

A \$15.00

B \$20.00

C \$22.00

D \$25.00

10. **Explain It** If you have a two-digit divisor and a three-digit dividend, does the quotient always have the same number of digits?
- _____

Estimating and Dividing with Greater Numbers

Estimate first. Then use a calculator to find the quotient. Round to the nearest hundredth if necessary.

1. $53\overline{)6,324}$ 2. $52\overline{)6,348}$ 3. $86\overline{)31,309}$ 4. $33\overline{)3,455}$

5. $17,496 \div 91 =$ _____ 6. $25,214 \div 47 =$ _____

7. $2,312 \div 26 =$ _____ 8. $4,895 \div 83 =$ _____

The Humphrey family decided to fly from San Francisco to New York City, and from there to Rome, New Delhi, and finally Tokyo.

9. It took the Humphrey family 6 hr to travel from San Francisco to New York. How many kilometers did they travel per hour?

Distances by Plane	
San Francisco to New York	4,140 km
New York to Rome	6,907 km
Rome to New Delhi	5,929 km
New Delhi to Tokyo	5,857 km

10. During the flight from New Delhi to Tokyo, flight attendants came through with snacks every 600 km. How many times did they come through?

11. **Reasoning** Use the data from Exercises 9 and 10. When the family arrived in New Delhi from Rome, the youngest son asked the pilot how fast he was flying the plane. The pilot told him about 847 km per hour. How many hours did it take the family to fly from Rome to New Delhi?

A 5 h B 6 h C 7 h D 8 h

12. **Explain It** Write a word problem that would require you to use $5,621 \div 23$.

Name _____

Problem Solving: Missing or Extra Information

Decide if each problem has extra or missing information. Solve if possible.

1. It takes 4 hours to drive from Boston to New York. Jordan has a meeting in New York at 2:00 P.M. Can she arrive at her meeting on time?
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2. Franco hikes 4 miles each day for 5 days. He carries 100 ounces of water with him. It takes him 1 hour to hike 4 miles. How many hours did he hike in 5 days?
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3. **Write a Problem** Write a real-world problem that gives extra information. Under the problem write what the extra information is.
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4. **Critical Thinking** Jorge buys T-shirts for \$4 each and paints designs on them. He sells the designed T-shirts for \$7 each. What information is needed to find how much profit he makes in one week?

- A The price of T-shirts at a store
- B The color of the T-shirts that he buys
- C The types of designs he draws on the T-shirts
- D The number of T-shirts he sells in one week

5. **Explain It** Krista can type 60 words per minute. She wrote an essay by hand in 5 hours, and it is now 4 pages long and has 500 words in it. She wants to type up her essay. About how long will it take to type her essay? Write what the extra or missing information is. Then solve if possible.
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