

# Estimating Quotients with 2-Digit Divisors

You can use compatible numbers to estimate a quotient.

Find  $175 \div 32$ .

**Step 1:** Find compatible numbers for 175 and 32.

32 rounds to 30.

Think: 18 can be divided evenly by 3.

180 is close to 175 and 30 is close to 32.

180 and 30 are compatible numbers.

**Step 2:** Divide. Use patterns to help you, if possible.

Think:  $180 \div 30$  is the same as  $18 \text{ tens} \div 3 \text{ tens}$ .

$$18 \div 3 = 6$$

$$\text{So, } 180 \div 30 = 6.$$

**Step 3:** Check for reasonableness.

$$6 \times 30 = 180$$

So, a good estimate of  $175 \div 32$  is 6.

Estimate each quotient using compatible numbers.

1.  $298 \div 25$  \_\_\_\_\_

2.  $5,391 \div 77$  \_\_\_\_\_

3.  $24,303 \div 12$  \_\_\_\_\_

4.  $276 \div 42$  \_\_\_\_\_

5.  $1,347 \div 54$  \_\_\_\_\_

6.  $5,564 \div 91$  \_\_\_\_\_

At Elmer Elementary School, fifth-grade students are saving money for a summer trip to Washington, D.C.

7. The money Percy has saved is how many times as great as the money James has saved?

\_\_\_\_\_

\_\_\_\_\_

Student	Amount Saved
Percy	\$125
Emily	\$ 80
George	\$202
James	\$ 41
Bertha	\$159

Name \_\_\_\_\_

# 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. 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.

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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.

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

\_\_\_\_\_

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

**A** 7

**B** 17

**C** 70

**D** 700

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

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