

Name: \_\_\_\_\_

## 9. Estimate Quotients

### A. Visual Learning

How can you estimate quotient?

Estimate  $47 \div 5$

#### Use compatible numbers

**Step 1:** Find the compatible numbers

Think of a number that is close to 47 and is easy to divide by 5.

45 can be divided by 5.

45 is close to 47.



So 45 and 5 are **compatible numbers**.

**Step 2:** Divide  $47 \div 5$

$$\begin{array}{c} \downarrow \\ 45 \end{array} \div 5 = 9$$

$47 \div 5$  is about 9.

#### Use multiplication

Think of a multiplication fact with 5.  
9 times what number is about 47.

$$9 \times 5 = 45.$$

$$45 \div 5 = 9$$

So,  $47 \div 5$  is about 9.

There is more than one way to estimate a quotient.



### B. Vocabulary

estimate: \_\_\_\_\_

quotient: \_\_\_\_\_

compatible numbers: \_\_\_\_\_

dividend: \_\_\_\_\_

### C. Independent Practice

In 1 – 6, estimate each quotient.

1.  $15 \div 2$  is about \_\_\_\_\_



$$14 \div 2 = \underline{\hspace{2cm}}$$

2.  $26 \div 4$  is about \_\_\_\_\_



$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

3.  $33 \div 5$  is about \_\_\_\_\_



$$\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

4.  $45 \div 6$  is about \_\_\_\_



\_\_\_\_  $\div$  \_\_\_\_ = \_\_\_\_

5.  $34 \div 8$  is about \_\_\_\_



\_\_\_\_  $\div$  \_\_\_\_ = \_\_\_\_

6.  $55 \div 9$  is about \_\_\_\_



\_\_\_\_  $\div$  \_\_\_\_ = \_\_\_\_

7. Tick  $\checkmark$  all the statements with correctly estimated quotients.

☐

$33 \div 8$  is about 4.

☐

$88 \div 3$  is about 30.

☐

$9 \div 4$  is about 2.

☐

$25 \div 7$  is about 3.

☐

$58 \div 7$  is about 7.

☐

$42 \div 5$  is about 8.

*Solve the problems.*

8. Anna has 25 insects in her nature collection.

She has 3 times as many insects as leaves in her collection.

**About** how many leaves does she have in her collection?



A. 75 leaves

B. 22 leaves

C. 10 leaves

D. 8 leaves

9. The third graders have 37 straws for a picnic.

They want to put an equal number of straws in 5 cups.

**About** how many straws do they put in each cup?



A. They put about 5 straws in each cup.

B. They put about 7 straws in each cup.

C. They put about 37 straws in each cup.

D. They put about 185 straws in each cup.

10\*. Can John use the compatible numbers to the right to estimate  $71 \div 8$ ? Explain.

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$71 \div 8$



$70 \div 8 = \underline{\quad}$

