Name: _____

9. Estimate Quotients

A. Visual Learning

How can you estimate quotient?

Estimate **47 ÷ 5**

Use compatible numbers	Use multiplication
Step 1: Find the compatible numbers Think of a number that is close to 47 and is easy to divide by 5.	Think of a multiplication fact with 5. 9 times what number is about 47.

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 ÷ 5

$45 ÷ 5 = 9$

$47 ÷ 5$ **is about** 9.

Use multiplication

Think of a multiplication fact with 5.

9 times what number is about 47.

$9 × 5 = 45$.

$45 ÷ 5 = 9$

So, $47 ÷ 5$ 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. $15 ÷ 2$ is about_____

$14 ÷ 2 =$ _____

2. $26 ÷ 4$ is about _____

____ ÷ ____ = _____

3. $33 ÷ 5$ is about_____

____ ÷ ____ = ____

4. $45 \div 6$ is about____

____ $\div$ ____ = ____

5. $34 \div 8$ is about ____

____ $\div$ ____ = ____

6. $55 \div 9$ is about ____

____ $\div$ ____ = ____

7. Tick ✓ all the statements with correctly estimated quotients.

☐ $33 \div 8$ is about 4.

☐ $9 \div 4$ is about 2.

☐ $58 \div 7$ is about 7.

☐ $88 \div 3$ is about 30.

☐ $25 \div 7$ is about 3.

☐ $42 \div 5$ 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.

_____

_____

_____

$71 \div 8$

$70 \div 8 =$ ____