Guided Notes

3.6 Estimating Quotients (6.NS.2)

Vocabulary

compatible

Definition: go well together

Example: $25 \div 5 = 5$ $48 \div 6 = 8$ peanut butter + jelly

What would make numbers compatible? They divide into each other perfectly.

Non-Example: ~~$7 \div 2$~~

To estimate quotients of decimals, use rounding and compatible numbers. **Compatible numbers** are numbers that are easy to divide mentally.

Steps:

#1 Round the divisor (smaller number) to a whole number (if it's a decimal).
#2 Round the dividend (larger number) to a whole number that is a multiple of the divisor.

Example:

Estimate 88.75 ÷ 10.1

✓ Round the divisor, 10.1, to a whole number……10.
✓ Round the dividend, 88.75, to a whole number that is a multiple of 10……90.

88.8 ÷ 10.1 → 90 ÷ 10 → about 9

3.6 Estimating Quotients (6.NS.2)

Guided Practice: Estimate each quotient.

1.) $25 \div 4.7 \approx$

$25 \div 5$

5

2.) $40.79 \div 7 \approx$

$42 \div 7$

6

3.) $38.1\overline{)984.76}$

$40\overline{)1000} = 25$

$50\overline{)1000} = 20$

4.) The average yearly precipitation for Gulfport, Mississippi, is 65.3 inches. About how much precipitation does the area receive each month? ~~Explain why your answer is reasonable.~~
(HINT: How many months are in a year?)

$65.3 \div 12$

$72 \div 12 = 6$

The area receives about 6 inches of precipitation a month.

5.) Mauricio bought 6.75 yards of fabric for a total of $47.50. About how much was the cost per yard? ~~Explain why your answer is reasonable.~~

$47.50 \div 6.75$

$49 \div 7 = 7$

The cost per yard was about $7.

Partner Talk

Emily spent a total of $38.04 on four CDs. If each CD cost the same amount, what is a reasonable amount for the cost of each CD?

$38.04 \div 4$

$40 \div 4 = 10$

A reasonable amount for each CD is $10.

Building on the Essential Question - When is it helpful to estimate quotients?

It is helpful to estimate quotients when you're checking your answer to see if it's reasonable.

Rate Yourself - How confident are you about estimating quotients? Shade the ring that applies.