LESSON MAKER PRO

Close Enough Quotients

Use friendly numbers to estimate division.

GRADE 5 · 5.NOS.B.5.a

5.NOS.B.5.a "Apply estimation strategies to estimate quotients."

NAME _____ DATE _____

CHOOSE COMPATIBLE NUMBERS

To estimate a quotient, replace the dividend with a nearby number that is easy to divide by the divisor. Divide the compatible numbers, then use about to show that your answer is an estimate.

WORKED EXAMPLE

Estimate 238 / 6.

1. Choose 240 because it is close to 238 and divides evenly by 6.
2. Divide: 240 / 6 = 40.
3. So 238 / 6 is about 40.

Answer: About 40

PRACTICE 6 problems

1 Estimate 197 / 4 using a nearby compatible dividend.

ANSWER _____

2 Estimate 358 / 9 using a nearby compatible dividend.

ANSWER _____

3 Estimate 482 / 8 using a nearby compatible dividend.

ANSWER _____

4 Estimate 623 / 7. Write the compatible division you used and your estimate.

ANSWER _____

_____

5 Which is closer to 297 / 5: 300 / 5 or 250 / 5? Write the closer division and its estimate.

ANSWER _____

_____

6 A student says 811 / 9 is about 9. Choose a nearby compatible dividend to make a better estimate.

ANSWER _____

APPLY IT Show your work

1 A class shares 347 stickers equally among 7 teams. About how many stickers will each team get?

WORK SPACE

ANSWER _____

2 A video game team earns 1,193 points over 8 rounds. About how many points does the team earn per round?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Mina estimates 1,186 / 29 by using 1,200 / 30. What is her estimate? Is it greater than or less than the exact quotient? Explain without finding the exact quotient.

WORK SPACE AND ANSWER

ANSWER KEY

Close Enough Quotients

GRADE 5 · 5.NOS.B.5.a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Estimate 197 / 4 using a nearby compatible dividend.	**About 50**
2	Estimate 358 / 9 using a nearby compatible dividend.	**About 40**
3	Estimate 482 / 8 using a nearby compatible dividend.	**About 60**
4	Estimate 623 / 7. Write the compatible division you used and your estimate.	**630 / 7 = 90, so about 90**
5	Which is closer to 297 / 5: 300 / 5 or 250 / 5? Write the closer division and its estimate.	**300 / 5 = 60, so about 60**
6	A student says 811 / 9 is about 9. Choose a nearby compatible dividend to make a better estimate.	**About 90**

PART 2 · APPLY IT

1. **About 50 stickers per team** Use 350 as a nearby compatible number. Then 350 / 7 = 50.
2. **About 150 points per round** Use 1,200 as a nearby compatible number. Then 1,200 / 8 = 150.

CHALLENGE

Mina's estimate is 40. It is less than the exact quotient because 29 × 40 = 1,160, which is less than 1,186.

For open-ended estimates, accept other nearby compatible numbers when the division is correct and the estimate is reasonable. In the challenge, the comparison must be supported without calculating the exact quotient.