LESSON MAKER PRO

Close Enough?

Estimate sums and differences, then decide when exact counts matter.

GRADE 3 · 3.NOS.D.6

3.NOS.D.6 "Estimate sums and differences within 1,000 using benchmark numbers and front-end estimation. Determine when an estimate is appropriate and when an exact answer is needed."

NAME _____ DATE _____

TWO WAYS TO ESTIMATE

For a benchmark estimate, round each number to the nearest hundred before you add or subtract. For a front-end estimate, keep each hundreds digit and change the tens and ones digits to zero. Use an exact answer when you need a precise count.

WORKED EXAMPLE

Estimate 362 + 218 using benchmark hundreds.

1. Round 362 to 400.
2. Round 218 to 200.
3. Add 400 + 200 = 600.

Answer: About 600

PRACTICE 6 problems

1 Estimate 274 + 315 using benchmark hundreds.

ANSWER _____

2 Estimate 746 - 283 using benchmark hundreds.

ANSWER _____

3 Estimate 438 + 157 using benchmark hundreds.

ANSWER _____

4 Estimate 587 + 241 using front-end estimation.

ANSWER _____

5 Estimate 962 - 317 using front-end estimation.

ANSWER _____

6 Find a benchmark estimate and a front-end estimate for 416 + 352. Which estimate is closer to the exact sum?

ANSWER _____

APPLY IT Show your work

1 The school library has 368 comic books and 224 animal books. About how many books are there altogether? Use benchmark hundreds. Is an estimate or an exact answer more useful for planning shelf space?

WORK SPACE

ANSWER _____

2 Maya's class collected 527 cans and gave 184 cans to a food pantry. How many cans are left? Should the class write an estimate or an exact answer on its collection report?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A game club has 794 tickets and gives away 268. Use benchmark hundreds to estimate how many remain. Then find the exact number. Is your estimate within 50 of the exact number? Show how you know.

WORK SPACE AND ANSWER

ANSWER KEY

Close Enough?

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Estimate 274 + 315 using benchmark hundreds.	**About 600**
2	Estimate 746 - 283 using benchmark hundreds.	**About 400**
3	Estimate 438 + 157 using benchmark hundreds.	**About 600**
4	Estimate 587 + 241 using front-end estimation.	**About 700**
5	Estimate 962 - 317 using front-end estimation.	**About 600**
6	Find a benchmark estimate and a front-end estimate for 416 + 352. Which estimate is closer to the exact sum?	**Benchmark: 800. Front-end: 700. The benchmark estimate is closer to the exact sum of 768.**

PART 2 · APPLY IT

1. **About 600 books. An estimate is useful for planning shelf space.** Round 368 to 400 and 224 to 200, then add to get 600. Planning shelf space does not require a precise count.
2. **343 cans are left. The report needs an exact answer.** Subtract 527 - 184 = 343. A collection report should give the precise number of cans left.

CHALLENGE

The estimate is 800 - 300 = 500 tickets. The exact number is 794 - 268 = 526 tickets. Yes, the estimate is within 50 because 526 - 500 = 26.

Accept estimates written with or without the word “about.” For problem 6, 768 is 32 away from 800 and 68 away from 700.