LESSON MAKER PRO

Pick Your Path

Choose an efficient way to add or subtract.

GRADE 4 · 4.NOS.B.3.d

4.NOS.B.3.d "Determine and explain when a strategy or algorithm is most efficient."

NAME _____ DATE _____

CHOOSE YOUR METHOD

When a number is close to a multiple of 10 or 100, adjusting it can make mental math quick. A written algorithm can help when you need to keep several place values lined up. Choose the method that takes less work, then explain why.

WORKED EXAMPLE

Find 301 - 198. Choose an efficient method and explain why.

1. Use mental math because 198 is close to 200.
2. Subtract 200: 301 - 200 = 101.
3. You subtracted 2 too many, so add 2: 101 + 2 = 103.

Answer: 103. Adjusting from 200 is quicker than regrouping in a written algorithm.

PRACTICE 6 problems

1 Find 199 + 246. Choose mental math or a written algorithm. Explain why your choice is efficient.

ANSWER _____

2 Find 368 + 457. Choose mental math or a written algorithm. Explain why your choice is efficient.

ANSWER _____

3 Find 703 - 298. Choose mental math or a written algorithm. Explain why your choice is efficient.

ANSWER _____

4 Find 825 - 476. Choose mental math or a written algorithm. Explain why your choice is efficient.

ANSWER _____

5 Find 450 + 250. Choose mental math or a written algorithm. Explain why your choice is efficient.

ANSWER _____

6 Find 634 - 287. Choose mental math or a written algorithm. Explain why your choice is efficient.

ANSWER _____

APPLY IT Show your work

1 Maya has 298 game cards. Her cousin gives her 175 more. How many cards does Maya have now? Choose an efficient method and explain why.

WORK SPACE

ANSWER _____

2 At a school fair, 437 tickets are sold on Friday and 286 on Saturday. How many tickets are sold in all? Choose an efficient method and explain why.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find 596 + 378 - 196. Explain why subtracting before adding is more efficient here.

WORK SPACE AND ANSWER

ANSWER KEY

Pick Your Path

GRADE 4 · 4.NOS.B.3.d

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 199 + 246. Choose mental math or a written algorithm. Explain why your choice is efficient.	**Mental math: 200 + 246 - 1 = 445. Adjusting from 200 makes the addition quick.**
2	Find 368 + 457. Choose mental math or a written algorithm. Explain why your choice is efficient.	**Written algorithm: 368 + 457 = 825. Lining up the digits helps keep track of regrouping.**
3	Find 703 - 298. Choose mental math or a written algorithm. Explain why your choice is efficient.	**Mental math: 703 - 300 + 2 = 405. Adjusting from 300 avoids regrouping.**
4	Find 825 - 476. Choose mental math or a written algorithm. Explain why your choice is efficient.	**Written algorithm: 825 - 476 = 349. Lining up place values helps keep track of regrouping.**
5	Find 450 + 250. Choose mental math or a written algorithm. Explain why your choice is efficient.	**Mental math: 450 + 250 = 700. Adding the hundreds and tens mentally is quick.**
6	Find 634 - 287. Choose mental math or a written algorithm. Explain why your choice is efficient.	**Written algorithm: 634 - 287 = 347. Lining up place values helps keep track of regrouping.**

PART 2 · APPLY IT

1. **473 cards. Mental math is efficient because 298 is close to 300.** Add 300 + 175 = 475, then subtract 2 to get 473.
2. **723 tickets. A written algorithm helps keep track of regrouping.** Add 437 + 286 by place value. The ones total 13, the tens total 12 after regrouping, and the hundreds total 7 after regrouping.

CHALLENGE

778. Subtract 596 - 196 = 400 first, then add 400 + 378 = 778. Subtracting first makes a multiple of 100.

Accept either method when the calculation is correct and the student gives a clear reason it is efficient. For the challenge, accept another correct method if the student also explains why subtracting first simplifies the calculation.