LESSON MAKER PRO

Pick Your Path

Choose a multiplication method that saves steps.

GRADE 5 · 5.NOS.B.4.d

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

NAME _____ DATE _____

CHOOSE BEFORE YOU MULTIPLY

Look for factors you can break apart or regroup to make the multiplication easier. If you do not see a useful shortcut, use partial products or the standard algorithm. Explain how your choice saves steps.

WORKED EXAMPLE

Find 46 x 19. Choose an efficient method and explain why it fits.

1. 19 is 1 less than 20, so find 46 x 20 first.
2. 46 x 20 = 920.
3. Subtract one group of 46: 920 - 46 = 874.

Answer: 46 x 19 = 874. Using 20 and subtracting one group of 46 is quicker than multiplying by 19 directly.

PRACTICE 6 problems

1 Find 54 x 30. What method saves you steps, and why?

ANSWER _____

2 Find 82 x 15. What method saves you steps, and why?

ANSWER _____

3 Find 72 x 25. What method saves you steps, and why?

ANSWER _____

4 Find 67 x 98. What method saves you steps, and why?

ANSWER _____

5 Find 47 x 38. What method saves you steps, and why?

ANSWER _____

6 Find 73 x 44. What method saves you steps, and why?

ANSWER _____

APPLY IT Show your work

1 A class orders 25 stickers for each of 24 students. How many stickers does it order? Choose an efficient method and explain why it fits.

WORK SPACE

ANSWER _____

2 A game club gives 32 players 49 tickets each. How many tickets does the club give out? Choose an efficient method and explain why it fits.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find 24 x 75 and 24 x 76. Do not start a new multiplication for the second product. Show how the first product helps you find the second, and explain why this saves work.

WORK SPACE AND ANSWER

ANSWER KEY # Pick Your Path

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 54 x 30. What method saves you steps, and why?	**54 x 30 = 1,620. Multiply 54 x 3 = 162, then multiply by 10 because 30 is 3 tens.**
2	Find 82 x 15. What method saves you steps, and why?	**82 x 15 = 1,230. Break 15 into 10 + 5 to find 820 + 410.**
3	Find 72 x 25. What method saves you steps, and why?	**72 x 25 = 1,800. Since 4 x 25 = 100, regroup 72 as 18 x 4 and find 18 x 100.**
4	Find 67 x 98. What method saves you steps, and why?	**67 x 98 = 6,566. Find 67 x 100 = 6,700, then subtract 67 x 2 = 134.**
5	Find 47 x 38. What method saves you steps, and why?	**47 x 38 = 1,786. Partial products work well: 47 x 30 = 1,410 and 47 x 8 = 376, so add them.**
6	Find 73 x 44. What method saves you steps, and why?	**73 x 44 = 3,212. Partial products keep the place values clear: 73 x 40 = 2,920 and 73 x 4 = 292, so add them.**

PART 2 · APPLY IT

1. **600 stickers** Regroup 24 x 25 as 6 x (4 x 25). Since 4 x 25 = 100, the product is 6 x 100 = 600.
2. **1,568 tickets** Use 49 = 50 - 1 because multiplying by 50 is quick. Find 32 x 50 - 32 = 1,600 - 32 = 1,568.

CHALLENGE

24 x 75 = 1,800 because (6 x 4) x 75 = 6 x 300. Then 24 x 76 = 1,800 + 24 = 1,824. The second product needs only one addition because 76 is one more than 75.

Accept any correct pencil-and-paper method with a specific explanation of why it saves steps. Students may use different efficient methods for the same product.