LESSON MAKER PRO

Pick a Quick Fact

Choose a helpful fact to multiply.

GRADE 3 · 3.NOS.D.7.c

3.NOS.D.7.c "Determine and explain when a strategy is most efficient."

NAME _____ DATE _____

CHOOSE YOUR STRATEGY

Look for a fact you know that can help you find a new fact. For 9 groups, find 10 groups and subtract 1 group. For an even number of groups, doubling a smaller fact may take fewer steps.

WORKED EXAMPLE

Find 6 x 5 by doubling a smaller fact.

1. Half of 6 groups is 3 groups.
2. 3 x 5 = 15.
3. Double 15: 15 + 15 = 30.

Answer: 6 x 5 = 30

PRACTICE 6 problems

1 Find 9 x 7. Show a helpful fact and tell why you chose it.

ANSWER _____

2 Find 4 x 7. Show a helpful fact and tell why you chose it.

ANSWER _____

3 Find 8 x 3. Show a helpful fact and tell why you chose it.

ANSWER _____

4 Find 9 x 3. Show a helpful fact and tell why you chose it.

ANSWER _____

5 Find 8 x 7. Show a helpful fact and tell why you chose it.

ANSWER _____

6 Find 4 x 3. Show a helpful fact and tell why you chose it.

ANSWER _____

APPLY IT Show your work

1 Nine friends each get 2 stickers. How many stickers do they get in all? Show a helpful fact and explain why you chose it.

WORK SPACE

ANSWER _____

2 Eight teams each make 4 paper airplanes. How many airplanes do they make in all? Show a helpful fact and explain why you chose it.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A student finds 9 x 8 by adding 8 nine times. Find the product a faster way. Explain why your way takes fewer steps.

WORK SPACE AND ANSWER

ANSWER KEY

Pick a Quick Fact

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 9 x 7. Show a helpful fact and tell why you chose it.	**10 x 7 = 70; 70 - 7 = 63. Multiplying by 10 is quick.**
2	Find 4 x 7. Show a helpful fact and tell why you chose it.	**2 x 7 = 14; double 14 to get 28. Doubling a smaller fact is quick.**
3	Find 8 x 3. Show a helpful fact and tell why you chose it.	**4 x 3 = 12; double 12 to get 24. Doubling a smaller fact is quick.**
4	Find 9 x 3. Show a helpful fact and tell why you chose it.	**10 x 3 = 30; 30 - 3 = 27. Multiplying by 10 is quick.**
5	Find 8 x 7. Show a helpful fact and tell why you chose it.	**4 x 7 = 28; double 28 to get 56. Doubling a smaller fact is quick.**
6	Find 4 x 3. Show a helpful fact and tell why you chose it.	**2 x 3 = 6; double 6 to get 12. Doubling a smaller fact is quick.**

PART 2 · APPLY IT

1. **18 stickers. Using 10 x 2 is quick because multiplying by 10 is easy.** Find 10 x 2 = 20, then subtract 2 for the extra group. 20 - 2 = 18.
2. **32 airplanes. Doubling 4 x 4 is quick because it gives 8 groups.** Find 4 x 4 = 16, then double 16. The teams make 32 airplanes.

CHALLENGE

10 x 8 = 80, and 80 - 8 = 72. This takes fewer steps than adding 8 nine times.

Accept other correct strategies when the student shows a helpful fact and explains why it makes the calculation efficient.