

# Multiple Methods

You need ✓ a classmate

## Activity

There are 27 children in Room 1, and each child needs 3 exercise books. The teacher asks Bridget to find out how many exercise books the class needs to buy. Bridget asks some of her classmates how they would solve  $3 \times 27$ .



27 is close to 30.  
 $30 \times 3 = 90$ .  
Then I take off  
 $3 \times 3 = 9$ .  
 $90 - 9 = 81$

I know  $3 \times 20$  is 60, and  $3 \times 7$  is 21.  
 $60 + 21 = 81$ , so  $3 \times 27$  is 81.



I did  $3 \times 25 = 75$  and  $3 \times 2 = 6$ ,  
so  $3 \times 27$  is the same as  
 $75 + 6$ , which is 81.

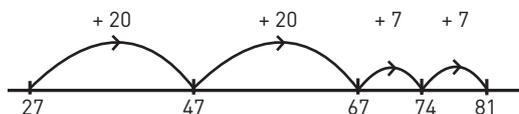
I find it easier to add.  
 $27 + 27 = 54$ ,  
 $54 + 20 = 74$ , and  
 $74 + 7 = 81$ .



I did  
 $9 \times 9 = 81$ .



I like using number lines:



How did Nandan get  
 $9 \times 9$  out of  $3 \times 27$ ?



1. Ask at least three of your classmates how they would solve the following problems:
  - a.  $48 \times 5$
  - b.  $16 \times 4$
  - c.  $92 \times 4$
2. Compare the different methods used by your classmates and decide which you think is the best method for solving each question. Explain why you think this.
3. Bridget decides to make a chart of the different multiplication strategies used by her classmates. This is her chart:

 <p>Hamish's strategy</p> <p>Using tidy numbers: looking for an easy number to work with</p>	 <p>Fili's strategy</p> <p>Using place value</p>
 <p>Wai Li's strategy</p> <p>Using known multiplication facts</p>	 <p>Keriat's strategy</p> <p>Using repeated addition</p>
 <p>Nandan's strategy</p> <p>Trebling and dividing by 3 (or doubling and halving)</p>	 <p>Tamahou's strategy</p> <p>Using a number line</p>

- a. Show how each student would use their method to solve:
  - i.  $48 \times 5$
  - ii.  $75 \times 9$
- b. For each method given, make up a multiplication problem (such as the ones in question 1) and show how you would use the method to solve it.