9 as a Factor

You can use two patterns to help you remember 9s facts.

9s Facts
$9 \times 0 = 0$
$9 \times 1 = 9$
$9 \times 2 = 18$
$9 \times 3 = 27$
$9 \times 4 = 36$
$9 \times 5 = 45$
$9 \times 6 = 54$
$9 \times 7 = 63$
$9 \times 8 = 72$
$9 \times 9 = 81$

1. The tens digit will be 1 less than the factor being multiplied by 9.

2. The sum of the digits of the product will always be 9, unless the other factor is 0.

Find 9×7.

The tens digit must be 1 less than 7.
The tens digit is 6.

The sum of the digits must be 9.
$9 - 6 = 3$, so the ones digit is 3.

The product is 63.

Find each product.

1. $9 \times 3 =$ _____

2. $2 \times 9 =$ _____

3. $1 \times 9 =$ _____

4. $5 \times 9 =$ _____

5. $5 \times 8 =$ _____

6. $6 \times 9 =$ _____

7. $2 \times 7 =$ _____

8. $0 \times 9 =$ _____

9. $4 \times 9 =$ _____

10. $\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$

11. $\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$

12. $\begin{array}{r} 8 \\ \times 9 \\ \hline \end{array}$

13. $\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$

14. $\begin{array}{r} 9 \\ \times 2 \\ \hline \end{array}$

15. Multiply 6 and 9. _____

16. Multiply 0 and 9. _____

17. **Communicate** Look at the table of 9s facts. Do you see another number pattern in the multiples of 9? Explain.

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