Activity 3

Repeating Elevens

Name _____

Date _____

1. Complete each computation.

   11 x 1 = 11   11 x 8   = _____

   11 x 2 = 22   11 x 9   = _____

   11 x 3 = 33   11 x 10 = _____

   11 x 4 = 44   11 x 11 = _____

   11 x 5 = _____   11 x 12 = _____

   11 x 6 = _____   11 x 13 = _____

   11 x 7 = _____

2. What patterns do you notice in the answers?

   _____

   _____

   _____

3. Predict these products:

   11 x 18 = _____

   11 x 19 = _____

4. Use your calculator to find these two products:

   11 x 18 = _____

   11 x 19 = _____

   Explain why your predictions were or were not accurate.

   _____

   _____

   _____

5. What happens when you multiply any two-digit number by 11? Write a generalization that explains the pattern.

   _____

   _____

   _____

6. Complete each computation:

   14 x 111 = _____   36 x 111 = _____

   18 x 111 = _____   52 x 111 = _____

   24 x 111 = _____   54 x 111 = _____

   26 x 111 = _____   74 x 111 = _____

   34 x 111 = _____   78 x 111 = _____

7. What patterns do you notice in the answers?

   _____

   _____

8. Predict these products:

   32 x 111 = _____

   41 x 111 = _____

   53 x 111 = _____

   90 x 111 = _____

   98 x 111 = _____

9. Use your calculator to find the products:

   32 x 111 = _____

   41 x 111 = _____

   53 x 111 = _____

   90 x 111 = _____

   98 x 111 = _____

   Explain why your predictions were or were not accurate.

   _____

   _____

   _____

10. What happens when you multiply 111 by any two-digit number with a digit sum less than 10? Write a generalization that explains the pattern.

   _____

   _____

   _____

11. Investigate what happens when you multiply 111 times a two-digit number with a digit sum greater than nine. What patterns do you see? Why is the digit sum of the two-digit number important?

   _____

   _____

   _____

   _____

   _____

12. Complete each computation:

   24 x 1111 = _____

   26 x 1111 = _____

   34 x 1111 = _____

   36 x 1111 = _____

   54 x 1111 = _____

   58 x 1111 = _____

13. Predict these products:

   14 x 1111 = _____

   44 x 1111 = _____

   63 x 1111 = _____

   61 x 1111 = _____

   84 x 1111 = _____

14. Use your calculator to find the products:

   14 x 1111 = _____

   44 x 1111 = _____

   63 x 1111 = _____

   61 x 1111 = _____

   84 x 1111 = _____

   Explain why your predictions were or were not accurate.

   _____

   _____

   _____

15. What happens when you multiply any two-digit number by 1111? Write a generalization that explains the pattern.

_____

_____

_____

16. Predict these products:

63 x 111	= _____		65 x 11111 = _____
63 x 1111	= _____		66 x 111	= _____
63 x 11111	= _____		66 x 1111	= _____
64 x 111	= _____		66 x 11111 = _____
64 x 1111	= _____		67 x 111	= _____
64 x 11111	= _____		67 x 1111	= _____
65 x 111	= _____		67 x 11111 = _____
65 x 1111	= _____		

17. Use your calculator to find the products:

63 x 111	= _____		65 x 11111 = _____
63 x 1111	= _____		66 x 111	= _____
63 x 11111	= _____		66 x 1111	= _____
64 x 111	= _____		66 x 11111 = _____
64 x 1111	= _____		67 x 111	= _____
64 x 11111	= _____		67 x 1111	= _____
65 x 111	= _____		67 x 11111 = _____
65 x 1111	= _____		

18. Describe any patterns you notice.

_____

_____

_____