Name _____ Date _____

Multiplying by 3 Using Patterns

Multiplying by 3 is easier than multiplying by other numbers because of a certain pattern. When you multiply any number by 3, the digits of the answer must add up to a multiple of 3. Here are the multiples of 3 up to 100:

3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99.

3 x 4 = 12. If you add together the two digits of the answer, you get 3. That is because 1 + 2 = 3. 3 is the first number on the list of multiples of 3 above. This is how you know the answer is right! If the answer is not on the list above, it is wrong.

3 x 16 = 48. Add up the two digits of the answer, 4 + 8 = 12. Since 12 is on the list of multiples of 3 above, the answer is probably right.

Solve the multiplication problems below and check your answer using this method. Show your work.

1. 3 x 8 = _____

2. 3 x 11 = _____

3. 3 x 14 = _____

4. 3 x 19 = _____

5. 3 x 20 = _____

6. 3 x 27 = _____

Answer the question. Then, put a check by the problems that have to be wrong:

Ex: 3 x 9 = 26. Does 2 + 6 = a multiple of 3? (In other words, is 8 on the list above?) No.

7. 3 x 13 = 39. Does 3 + 9 = a multiple of 3? ____

8. 3 x 15 = 45. Does 4 + 5 = a multiple of 3? ____

9. 3 x 21 = 62. Does 6 + 2 = a multiple of 3? ____

10. 3 x 26 = 78. Does 7 + 8 = a multiple of 3? ____

11. 3 x 33 = 97. Does 9 + 7 = a multiple of 3? ____