Name Date

1. a. Skip-count by nines down from 90.

90 8 72 63 54 45 36 27 18 9

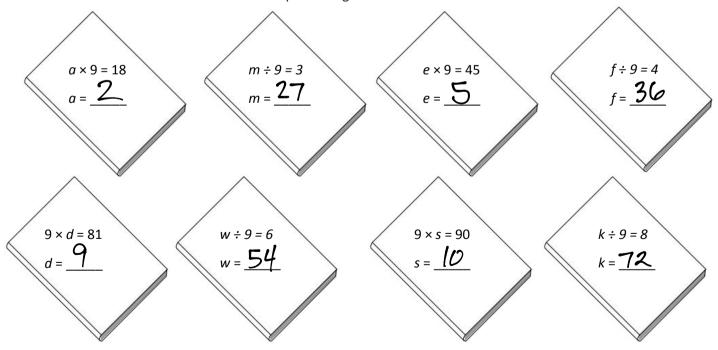
b. Look at the **tens** place in the count-by. What is the pattern?

The digit in the tens place goes down by one each time.

c. Look at the ones place in the count-by. What is the pattern?

The digit in the ones place goes up by one each time.

2. Each number sentence contains a letter representing the unknown. Find the value of each unknown.



Lesson 13: Date:

Identify and use arithmetic patterns to multiply. 7/31/13



- 3. Solve.
- What is 10 more than 0?  $\frac{10}{9}$  b. What is 10 more than 9?  $\frac{19}{18}$  c. What is 10 more than 18?  $\frac{28}{27}$  What is 1 less?  $\frac{18}{18}$  What is 1 less?  $\frac{27}{3\times 9}$   $\frac{2}{27}$

- What is 1 less?  $\frac{36}{4 \times 9} = \frac{36}{36}$
- 10 more than 27? 37 e. What is 10 more than 36? 46 What is 1 less? 45What is 1 less?  $\frac{45}{5\times9}$ 
  - f. What is 10 more than 45? \_55 What is 1 less? 546×9= **54**

- What is 10 more than 54? 64What is 1 less?  $\frac{63}{7 \times 9} = \frac{63}{63}$
- h. What is 10 more than 63?  $\overline{73}$  i. What is 10 more than 72?  $\underline{82}$ What is 1 less? <u>72</u>
  - What is 1 less?  $\boxed{81}$  $9 \times 9 = 81$

- What is 10 more than 81? What is 1 less? 90 10×9= 9D
- 4. Explain the pattern in Problem 2 and use the pattern to find the next 3 facts.

