Name _____ **Date** _____

4th Grade Math Study Guide for Lesson 15.4 (Division: Correcting Quotients)

Objective: To correct quotients when the estimate is too high or too low.
Read & Review: LEARN on Pp. 288-289

Vocabulary:
Dividend: The number that is to be divided in a division problem
Divisor: The number that divided the dividend
Quotient: The answer in a division problem

Background: Consider the following…

- Estimating the quotient helps locate the position of the first digit.
- The estimate gives an approximate quotient, and is seldom more than one digit off.
- When you subtract the product of the quotient and divisor from the dividend, the estimate is too low if the difference is greater than the divisor.
- If the product of the quotient and the divisor is greater than the dividend, the estimate is too high.

Divide. $321 \div 38 = n$ $38\overline{)321}$

When you are dividing, sometimes the first digit you write in the quotient is too high or too low.

Too High	Too Low	Just Right
$\begin{array}{r} 9 \\ 38\overline{)321} \\ -342 \end{array}$	$\begin{array}{r} 7 \\ 38\overline{)321} \\ -266 \\ \hline 55 \end{array}$	$\begin{array}{r} 8 \\ 38\overline{)321} \\ -304 \\ \hline 17 \end{array}$
Since 342 > 321, the quotient 9 is too high. Use a lesser number.	Since the remainder, 55, is greater than the divisor, 38, the quotient 7 is too low. Use a greater number.	Since the remainder, 17, is less than the divisor, 38, the quotient 8 is just right.

Practice: Review the information above and what you read in your textbook on Pp. 288-9 and complete the practice problems below.

Write *too high, too low,* or *just right* for each estimate. Explain.

1. $\begin{array}{r} 6 \\ 18\overline{)136} \\ -108 \\ \hline 28 \end{array}$ _____ _____

2. $\begin{array}{r} 7 \\ 16\overline{)103} \\ -112 \\ \hline \end{array}$ _____ _____

3. $\begin{array}{r} 8 \\ 17\overline{)139} \\ -136 \\ \hline 3 \end{array}$ _____ _____

4. $\begin{array}{r} 5 \\ 23\overline{)119} \\ -115 \\ \hline 4 \end{array}$ _____ _____

Assignment: Pp. 290-1 #10-36 (evens); #37-50 (all).