2. Round to the nearest...

Number	8,419,289,387	12,238,994,038	3,459,994,920	2,203,845,108
...ten million				
...hundred million				
...billion				

3. Round to the place of the underlined digit. Be careful with the nines!

a. $29\underline{9},724 \approx$ _____ **b.** $1,399,\underline{9}56 \approx$ _____

c. $698,99\underline{9},865 \approx$ _____ **d.** $499,\underline{9}98,325 \approx$ _____

To estimate, round the numbers in such a way that *you* can calculate the estimate in your head, depending on your mental math skills. Often this means rounding the numbers to the largest place. Compare the two estimates below.

Estimate 1	Estimate 2
$27 \times 3{,}910$	$27 \times 3{,}910$
$\approx 30 \times 4{,}000 = 120{,}000$	$\approx 25 \times 4{,}000 = 100{,}000$
Both numbers are rounded to the largest place they have (tens; thousands). The multiplication is easy (essentially a single-digit multiplication of 3×4).	Since 3,910 is rounded up, we round 27 *down* to 25. This will lessen the error of estimation in a *multiplication* problem. However, that would not happen with a subtraction or division.

4. Estimate the result using mental math and rounded numbers. Then find the exact value using a calculator. Lastly, find the error of estimation, which is the difference between your estimate and the exact answer.

a. 2,384 × 19,384 Estimation: Exact: Error of estimation:	**b.** 345 × 61,852 Estimation: Exact: Error of estimation:
c. 124,012 − 16 × 2,910 Estimation: Exact: Error of estimation:	**d.** 25,811 ÷ 487 Estimation: Exact: Error of estimation: