

Math Elem Ed Exam 2

Do the problems in order in your bluebook. Show your work.

1. Use a block model to illustrate $125 - 47$. Show and describe any and all steps.
2. Using the fact that 99 is close to 100, describe how you could multiply $99 \cdot 76$ quickly. Explain mathematically why this works.
3. Estimate $62 + 193 + 41 + 119 + 80 + 12$. Explain mathematically why this works.
4. Explain in detail how a numberline model with a car handles $6 - (-3)$.
5. For what values of the digit a is the integer $8747341379332a$ divisible by 3. What divisibility test are you using ?
6. Use the Euclidean algorithm to find the g.c.d. of 8532 and 3876. Show each step.
7. Working modulo 12, compute $7 + 5 + 4 + 8 + 10$. Do not use any calculations in base 10.
8. Factor $x^2 - 100$
9. Simplify $2^8 \cdot 2^{53}$