

Remember, there are two kinds of homework problems: ungraded and graded. Ungraded problems have answers in the back of the book. Graded problems don't have answers in the back of the book. Some of them will come with a symbol such as (\mathcal{E}) , meaning that it is an old exam question.

1. – §4.1 – 5 (ungraded).
2. – §4.2 – 1 a,b,c (ungraded).
3. – §4.3 – 3 (ungraded).
4. – §4.1 – 16. (Although the question doesn't specifically call for an explanation, I'd like a sentence or two at least.)
5. – §4.2 – 2 a,b,c.
6. – §4.2 – 16. (A harder one. You should do $k = 1$ and $k = 2$ first. Note also that $x^2 - 1$ factors into two numbers that differ by two.)
7. – §4.3 – 4 a,b.
8. – §4.3 - 10.
9. – (\mathcal{E}) Find the complete solution of the linear congruence $8x + 3 \equiv 10 \pmod{45}$.
10. – (\mathcal{E}) Determine all integers n with the property that the last three digits of $56n$, when written in the usual decimal notation, are "128".