

More Divisibility (1.1-1.6)

- Example theorem: If 6 divides an integer n , then 3 also divides n .
 - Walk through the proof. Emphasis on the fact that the proof consists of sentences, not simply equations.
 - Produce similar examples with different numbers.
- Example theorem: If an integer k is congruent to 7 modulo 2, then k is also congruent to 3 modulo 2.
 - Walk through the proof.
 - Produce similar examples with different numbers.
- Theorem 1.1: If a divides b and a divides c , then a also divides the sum of b and c .
- Theorem 1.2: If a divides b and a divides c , then a also divides the difference of b and c .
- Theorem 1.3: If a divides b and a divides c , then a also divides the product of b and c .
- Question 1.4: Can we weaken the hypotheses of theorem 1.3? Can we instead strengthen the conclusion?
- Theorem 1.5: Weakened version of theorem 1.3