Proposition 1.16: If m and n are even integers, then so is $m + n$.

Proof. Your proof goes here. For this one, please try to use the technique that I introduced in class of reminding the reader of the definition of divisibility early in the proof. "To show that $m + n$ is even we must show that ...". □

Proposition 1.17(ii) (Our version): If m is an integer and m is divisible by 0, then $m = 0$.

Proof. Your proof goes here. □

Proposition 1.18: Let $x \in \mathbb{Z}$. If x has the property that for all $m \in \mathbb{Z}$, $mx = m$, then $x = 1$.

Proof. Your proof goes here. □

Proposition 1.19: Let $x \in \mathbb{Z}$. If x has the property that for some nonzero $m \in \mathbb{Z}$, $mx = m$, then $x = 1$.

Proof. Your proof goes here. □

Proposition 1.24: Let $x \in \mathbb{Z}$. If $x \cdot x = x$ then $x = 0$ or $x = 1$.

Proof. Your proof goes here. □

Proposition 1.25(i): For all $m, n \in \mathbb{Z}$

$$-(m + n) = (-m) + (-n).$$

Proof. Your proof goes here. □

Proposition 1.25(ii): For all $m \in \mathbb{Z}$

$$-m = (-1) \cdot m.$$

Proof. Your proof goes here. □

Proposition 1.27(iii): For all $m, n, p, q \in \mathbb{Z}$

$$(m - n) \cdot (p - q) = (mp + nq) - (mq + np).$$

Proof. Your proof goes here. □

Proposition 1.27(v): For all $m, n, p \in \mathbb{Z}$

$$(m - n) \cdot p = mp - np.$$

Proof. Your proof goes here. □