(Q10)
(a) False.
As a counterexample, let $a = -a$ and $b = -b$. Then $a + a = 0 = b + b$, while a and b are not necessarily equal.
(b) False.
Let $\mathbb{F}$ be a field with the following addition table:

+	0	1	a	b
0	0	1	a	b
1	1	0	b	a
a	a	b	0	1
b	b	a	1	0

In this field, $\text{char}(\mathbb{F}) = 2$, which is prime, but $\mathbb{F}$ is not $\mathbb{Z}_2$.
(c) False.
Let $p(x) = (x^2 + 1)^2 = x^4 + 2x^2 + 1$ in $\mathbb{R}$. p is reducible, but has no solutions in $\mathbb{R}$.
(d) True.

Proof. Suppose for the sake of contradiction that p is irreducible and p has solutions. Then $\exists a : \ p(x) = (x - a)q(x)$, where q is another polynomial.
Then $\deg p > 1 \implies \deg q \geq 1$, which implies that p is in fact reducible, thus forming a contradiction. ■