Definition: When a and b are integers and a is nonzero, a **divides** b means there is an integer c such that $b = ac$. Symbolically, $F(\ (a,b)\ ) =$ and is a predicate over the domain _______ Other (synonymous) ways to say that $F(\ (a,b)\ )$ is true:

a is a **factor** of b $\qquad$ a is a **divisor** of b $\qquad$ b is a **multiple** of a $\qquad$ $a|b$

When a is a positive integer and b is any integer, $a|b$ exactly when b **mod** $a = 0$ When a is a positive integer and b is any integer, $a|b$ exactly $b = a \cdot (b \textbf{ div } a)$