$6 \mid (b-a) \iff 2 \mid (b-a) \wedge 3 \mid (b-a)$

Proof: For the forward direction, Assume that $6 \mid (b-a)$. ~~Since $2 \mid 6$~~ As $6 = 2 \cdot 3$, we have that $2 \mid 6$ and $3 \mid 6$. Since $6 \mid (b-a)$, applying transitivity twice, we have that $2 \mid (b-a)$ and $3 \mid (b-a)$.

For the reverse direction, assume that $2 \mid (b-a)$ and $3 \mid (b-a)$. By definition, there exists integers k and l such that $2k = b-a$ and $\boxed{3l = b-a}$. Hence, $\underbrace{2k}_{\text{even}} = \underbrace{3l}_{\text{parity depends on } l}$. Thus, $3 \cdot l$ is even which is possible if and only if $l = 2m$ for some integer m. Since $3l = b-a$, we have that $b-a = 3(2m) = 6m$ and hence by definition we have that $6 \mid b-a$.

$\square$