1B: $2^k \cdot x^\alpha, 3^l, 2 \cdot y^\beta, z^\gamma$

$x = 5, y = 7, z = 11$: $2 \cdot 7^\beta = 11^\gamma - 1 = 10 \cdot (11^{\gamma - 1} + \ldots + 1)$
is divisible by 5, contradiction.

$x = 5, y = 11, z = 7$: $2 \cdot 11^\beta = 7^\gamma - 1 = 6 \cdot (7^{\gamma - 1} + \ldots + 1)$
is divisible by 3, contradiction.

$x = 7, y = 5, z = 11$: $2 \cdot 5^\beta = 11^\gamma - 1 = (2 \cdot 5 + 1)^\gamma - 1 = 25 \cdot M + 10 \cdot \gamma$, so $\gamma$ must be a multiple of 5. It follows that $2 \cdot 5^\beta = 11^\gamma - 1 = 11^{5^\gamma} - 1 = (11^5)^\gamma - 1 = (11^5 - 1) \cdot ((11^5)^{\gamma - 1} + \ldots + 1)$
is divisible by $2 \cdot 5^2 \cdot 3,221$, contradiction. (We may and do assume $\beta \geq 2$ and $\gamma \geq 2$.)

$x = 7, y = 11, z = 5$: $2^k \cdot 7^\alpha = 2 \cdot 11^\beta - 2 = 2 \cdot (11^\beta - 1) = 2 \cdot 10 \cdot (11^{\beta - 1} + \ldots + 1)$
is divisible by 5, contradiction.

$x = 11, y = 5, z = 7$: $2 \cdot 5^\beta = 7^\gamma - 1 = 6 \cdot (7^{\gamma - 1} + \ldots + 1)$
is divisible by 3, contradiction.

$x = 11, y = 7, z = 5$: $2 \cdot 7^\beta = 5^\gamma - 1 = 4 \cdot (5^{\gamma - 1} + \ldots + 1)$
is divisible by $2^2$, contradiction.