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

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

x = 5, y = 11, z = 7: $2 \cdot 11^\beta = 7^\gamma - 1 = 6 \cdot (7^{\gamma-1} + ... + 1)$ 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 γ must be a multiple of 5. It follows that $2 \cdot 5^\beta = 11^\gamma - 1 = 11^{5\gamma'} - 1 = (11^5)^{\gamma'} - 1 = (11^5 - 1) \cdot ((11^5)^{\gamma'-1} + ... + 1)$ 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: $2^k \cdot 7^\alpha = 2 \cdot 11^\beta - 2 = 2 \cdot (11^\beta - 1) = 2 \cdot 10 \cdot (11^{\beta-1} + ... + 1)$ is divisible by 5, contradiction.

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

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