6B: $2\cdot3^l$, x^α, $2^k\cdot y^\beta$, $3\cdot z^\gamma$

x = 5, y = 7, z = 11: $2\cdot3^l = 3\cdot11^\gamma - 3 = 3\cdot(11^\gamma - 1) = 3\cdot10\cdot(11^{\gamma-1} + ... + 1)$ is divisible by 5, contradiction.

x = 5, y = 11, z = 7: $2\cdot3^l = 5^\alpha - 1 = 4\cdot(5^{\alpha-1} + ... + 1)$ is divisible by 2^2, contradiction.

x = 7, y = 5, z = 11: as in case z = 11 above.

x = 7, y = 11, z = 5: $2\cdot3^l = 3\cdot5^\gamma - 3 = 3\cdot(5^\gamma - 1) = 3\cdot4\cdot(5^{\gamma-1} + ... + 1)$ is divisible by 2^2, contradiction.

x = 11, y = 5, z = 7: $2\cdot3^l = 11^\alpha - 1 = 10\cdot(11^{\alpha-1} + ... + 1)$ is divisible by 5, contradiction.

x = 11, y = 7, z = 5: as in case z = 5 or in case x = 11 above.