8A: $6\cdot x^{\alpha}$, y^{β}, $2^{k}\cdot z^{\gamma}$, 3^{l}

x = 5, y = 7, z = 11: If l is odd then both $2^{k}\cdot 11^{\gamma}$ and $2^{k}\cdot 11^{\gamma} + 2 = 3^{l} + 1 = 4\cdot(3^{l-1} - 3^{l-2} + ... + 1)$ would be divisible by 4. So l is even, and so is $l' = l/2$: if not then $6\cdot 5^{\alpha} + 4 = 3^{l} + 1 = 3^{2l'} + 1 = 9^{l'} + 1 = 10\cdot(9^{l'-1} - 9^{l'-2} + ... + 1)$ would be divisible by 5. It follows that $2^{k}\cdot 11^{\gamma} = 3^{l} - 1 = 3^{4l''} - 1 = 81^{l''} - 1 = 80\cdot(81^{l''-1} + ... + 1)$ is divisible by 5, contradiction.

x = 5, y = 11, z = 7: $6\cdot 5^{\alpha} = 11^{\beta} - 1 = 10\cdot(11^{\beta-1} + ... + 1)$ yields $3\cdot 5^{\alpha-1} = 11^{\beta-1} + ... + 1$: β must be odd. It follows that $2^{k}\cdot 7^{\gamma} = 11^{\beta} + 1 = 12\cdot(11^{\beta-1} - 11^{\beta-2} + ... + 1)$ is divisible by 3, contradiction.

x = 7, y = 5, z = 11: $6\cdot 7^{\alpha} = 5^{\beta} - 1 = 4\cdot(5^{\beta-1} + ... + 1)$ is divisible by 2^2, contradiction.

x = 7, y = 11, z = 5: $6\cdot 7^{\alpha} = 11^{\beta} - 1 = 10\cdot(11^{\beta-1} + ... + 1)$ is divisible by 5, contradiction.

x = 11, y = 5, z = 7: $6\cdot 11^{\alpha} = 5^{\beta} - 1 = 4\cdot(5^{\beta-1} + ... + 1)$ is divisible by 2^2, contradiction.

x = 11, y = 7, z = 5: Both $6\cdot 11^{\alpha} + 2 = 2^{k}\cdot 5^{\gamma}$ and $6\cdot 11^{\alpha} - 6 = 6\cdot(11^{\alpha} - 1) = 6\cdot 10\cdot(11^{\alpha-1} + ... + 1)$ are divisible by 5, contradiction.