

$$16x^4 + 324z^4$$

$$= 16x^4 + 4 * 81z^4$$

$$= 16x^4 + 324z^4 + 4(4x^2)(9z^2) - 4(4x^2)(9z^2)$$

$$= (4x^2 + 18z^2)^2 - (2 * 2x * 3z)^2$$

$$= (4x^2 - 12xz + 18z^2)(4x^2 + 12xz + 18z^2)$$