Week 8 Monday

Make sure you know your neighbors' names. Then discuss:

Compute the Hilbert function, the Hilbert polynomial, the dimension, the degree, and the index of regularity of the ideal $I = \langle xy^r \rangle \subseteq k[x, y]$ (all in terms of the integer $r \geqslant 0$).

Affine Hilbert Functions 2