

# Some Basic Results About Algebraic Surfaces

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March 8, 2016

## **Riemann Roch Theorem**

$$l(D) - s(D) + l(K - D) = 1/2D \cdot (D - K) + 1 + p_a$$

Proof: By the calculation on sheaves

## **Hodge Index Theorem**

$H$  ample,  $D \neq 0$ ,  $D \cdot H = 0$ , then  $D^2 < 0$