AE 503

PRICES AND EQUILIBRIUM

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- **Suppose consumer A has endowments of fruit and fish:**

  $$\text{fruit} = \omega^1_A, \ \text{fish} = \omega^2_A$$

  Their prices are:

  $$\text{fruit} = p^1, \ \text{fish} = p^2$$

- **Consumer A's *wealth* I_A, given endowment and prices is:**

  $$I_A = \underbrace{p^1 \omega^1_A}_{\text{Value of good 1 endowment}} + \underbrace{p^2 \omega^2_A}_{\text{Value of good 2 endowment}}$$

  I_A: Wealth

- **Consumer A can now buy and sell goods 1 and 2 at prices p^1 and p^2, so the expression for wealth I_A can be thought of as a *budget line*.**

- **Think of *consumption* of goods 1 and 2 as opposed to endowments:**

$$I_A = p^1 x^1_A + p^2 x^2_A$$

where x^1_A and x^2_A are consumption of goods 1 and 2 respectively

Re-arranging I_A:

$$p^2 x^2_A = I_A - p^1 x^1_A$$

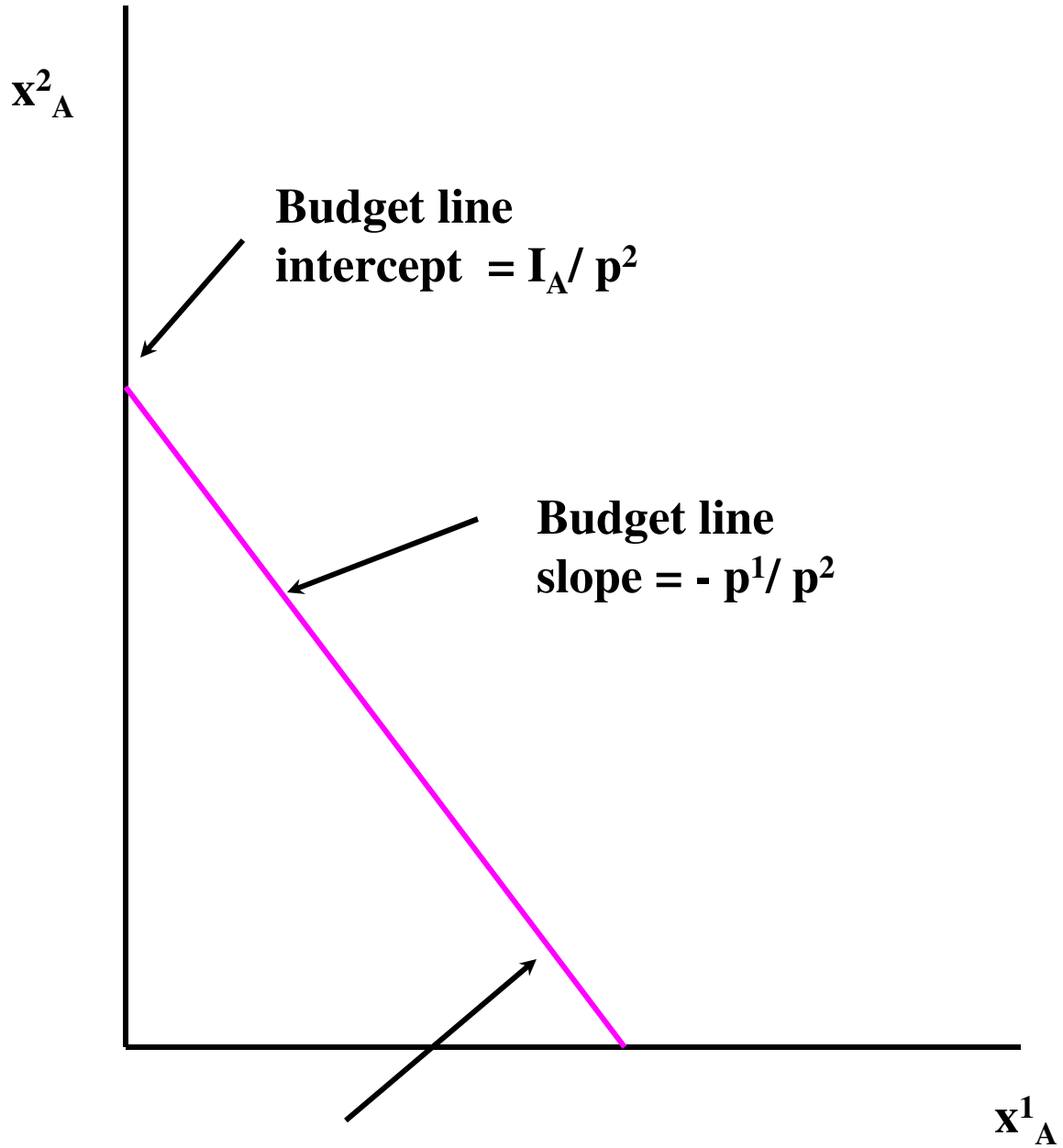
$$x^2_A = \frac{I_A}{p^2} - \frac{p^1}{p^2} x^1_A$$

where I_A / p^2 = the *intercept* of the budget line

and p^1 / p^2 = the *slope* of the budget line

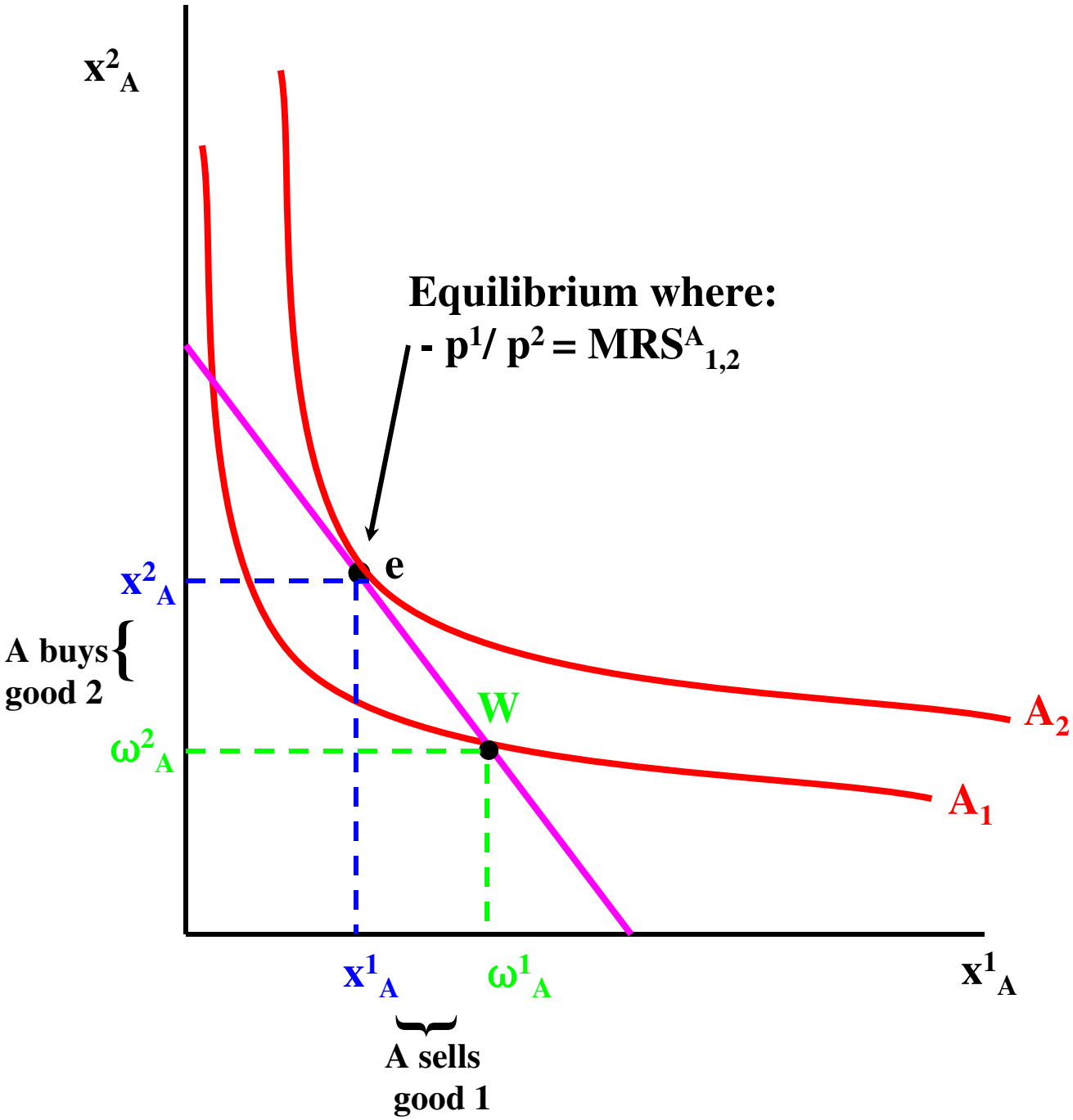
(See next figure)

BUDGET LINE



Budget line: $x^2_A = I_A / p^2 - p^1 / p^2 \, x^1_A$

EQUILIBRIUM AND BUDGET LINE



CHANGE IN PRICES AND EQUILIBRIUM