





$$e_{p_d} = \frac{\% \Delta Q_d}{\% \Delta \text{Price}}$$

Price	Quantity Demanded

5

7

18

30

50%



33%

[REDACTED]

[REDACTED]

=

1.51



Change in Q^d

$$30 - 18 = 12$$

Average quantity:

$$(30+18)/2 = 24$$

$$\% \Delta Q_d$$

$$12/24 = 0.5 \times 100 = 50\%$$

Change in price

$$7 - 5 = 2$$

Average price

$$(7 + 5) / 2 = 6$$

$\% \Delta \text{ Price}$

$$2/6 = 0.33 \times 100 = 33\%$$



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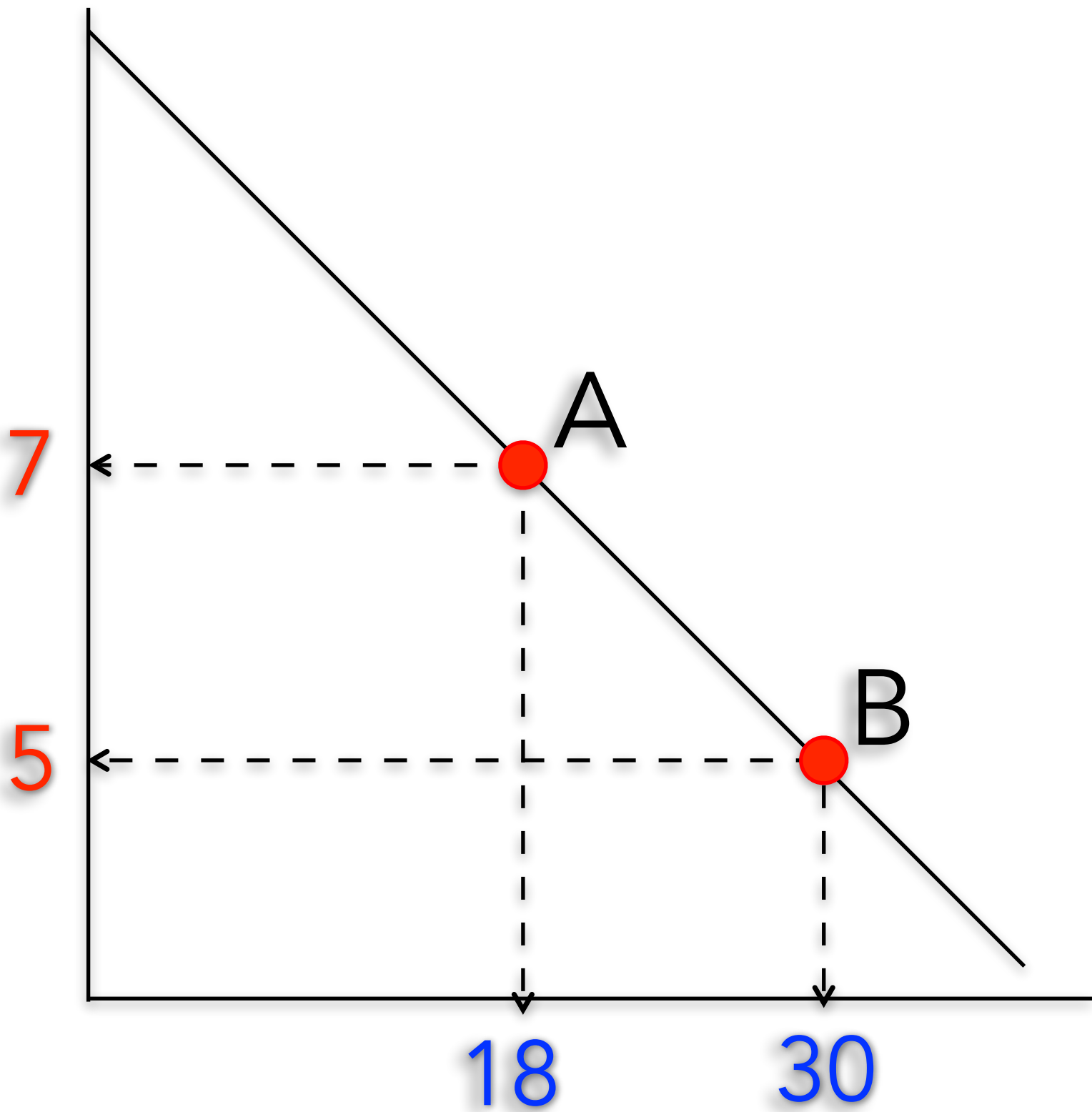


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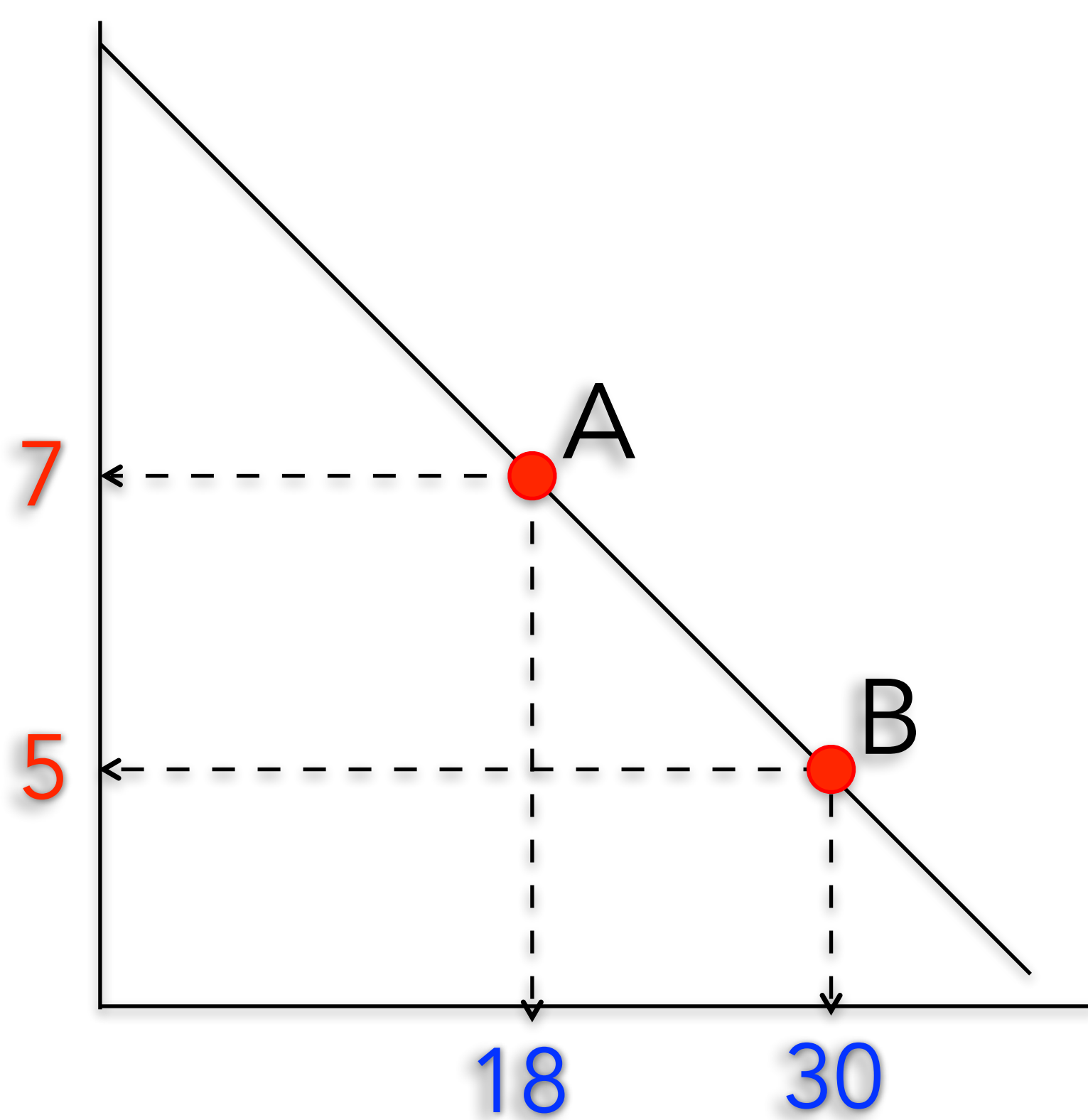
A 50% Change
in Quantity
Demanded



A 33%
Change in
price



The price elasticity of demand is **always negative**
because price and Q^d move in **opposite directions**:
add a negative sign



Price	Quantity Demanded
7	18
5	30

A 33% Change in price

A 50% Change in Quantity Demanded

Change in Q^d
 $30 - 18 = 12$

Average quantity:
 $(30 + 18) / 2 = 24$

$$\% \Delta Q^d = \frac{12}{24} = 0.5 \times 100 = 50\%$$

Change in price
 $7 - 5 = 2$

Average price
 $(7 + 5) / 2 = 6$

$$\% \Delta \text{Price} = \frac{2}{6} = 0.33 \times 100 = 33\%$$

$$e_p^d = \frac{\% \Delta Q^d}{\% \Delta \text{Price}} = \frac{50\%}{33\%} = -1.51$$

The price elasticity of demand is **always negative** because price and Q^d move in **opposite directions**:
add a negative sign

