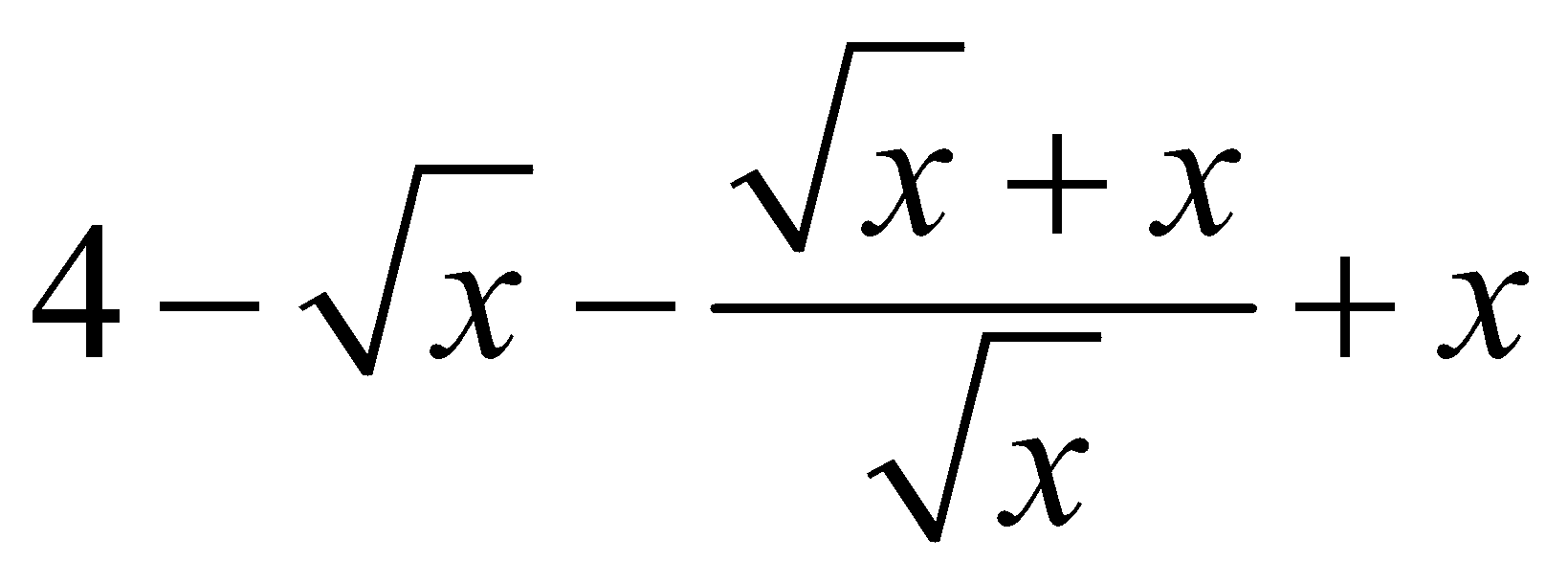
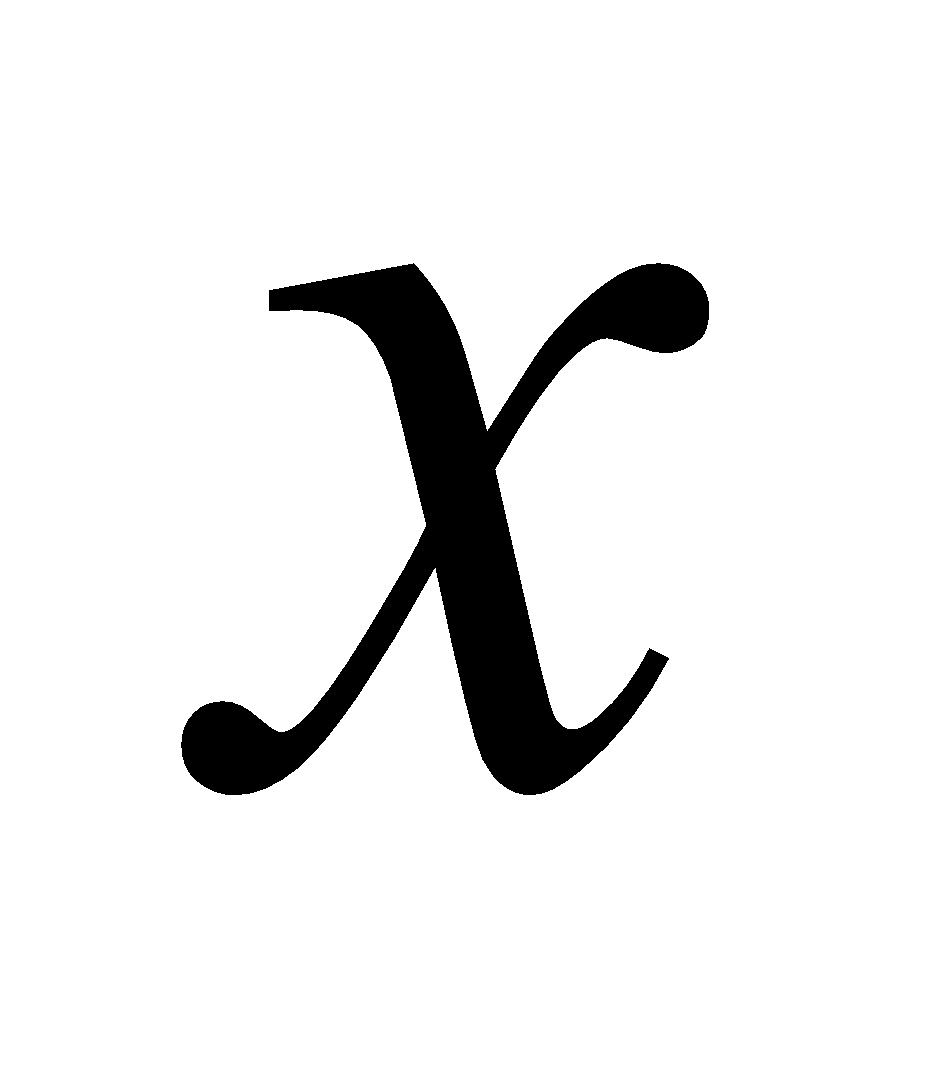
| **PHÒNG GIÁO DỤC VÀ ĐÀO TẠO**  **HUYỆN KRÔNG PẮC** | **ĐỀ THI CHỌN HỌC SINH GIỎI HUYỆN**  **Môn: Toán 9**  *Thời gian làm bài: 120 phút*  Đề gồm 01 trang |
| --- | --- |

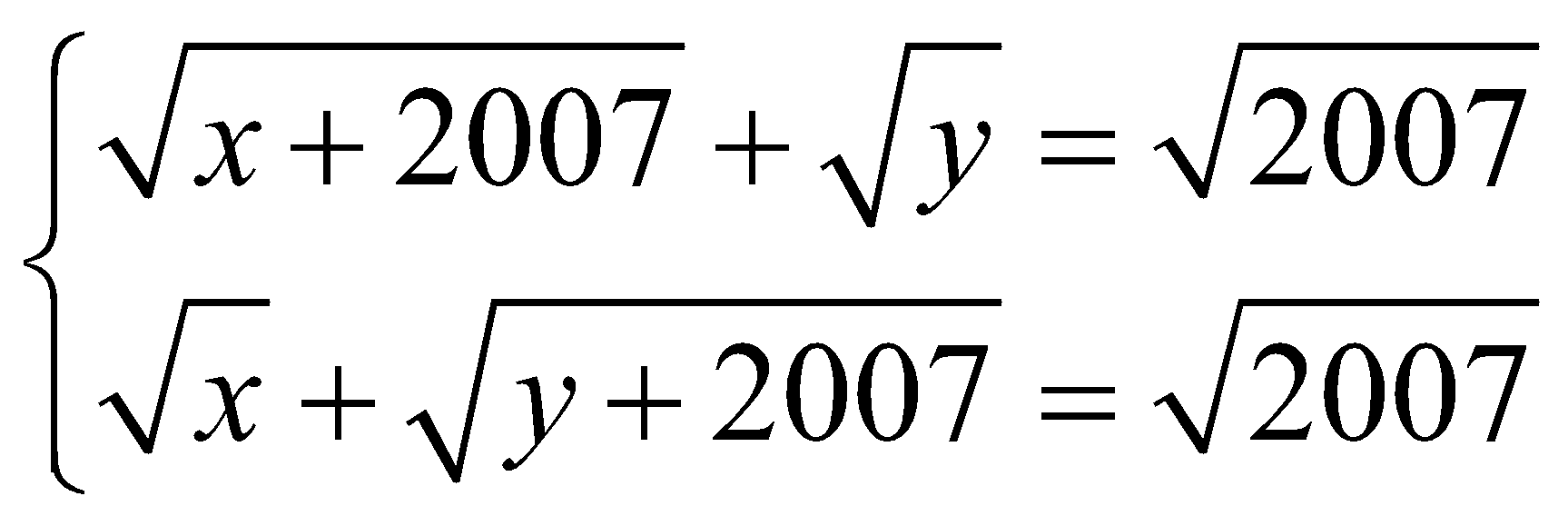
**Bài 1: (3,0 điểm)**

Cho A = 

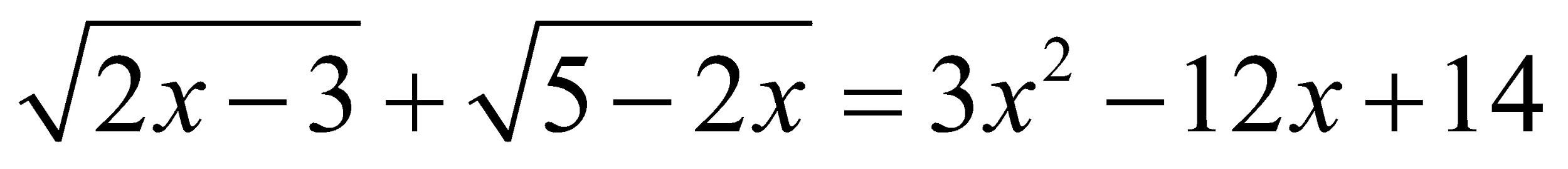
1. Rút gọn A. b) Tìm  để A nhận giá trị nhỏ nhất.

**Bài 2: (2,0 điểm)**

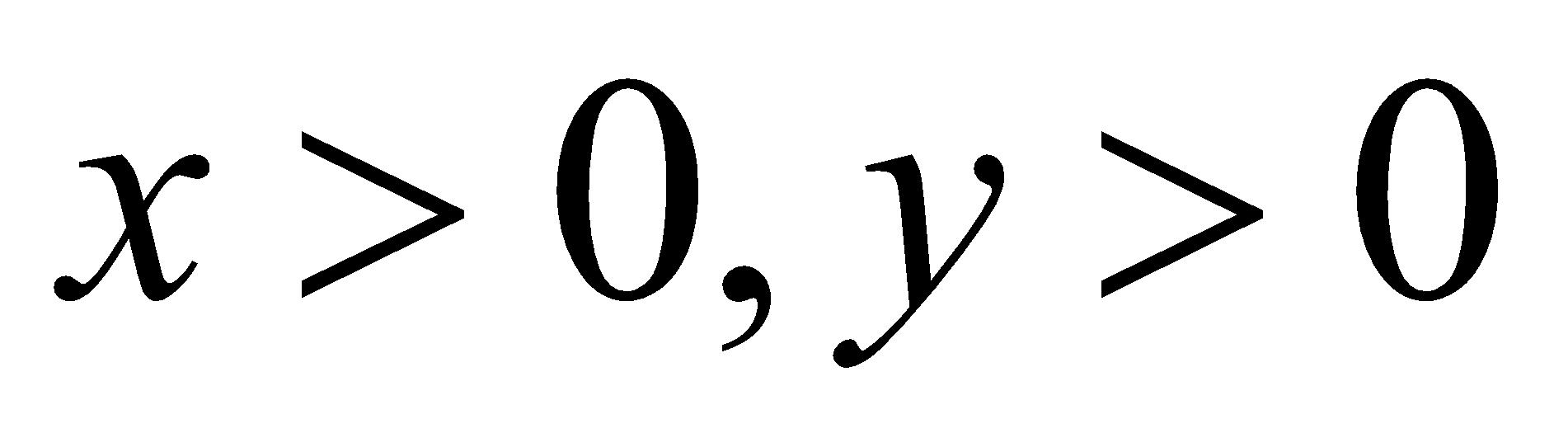
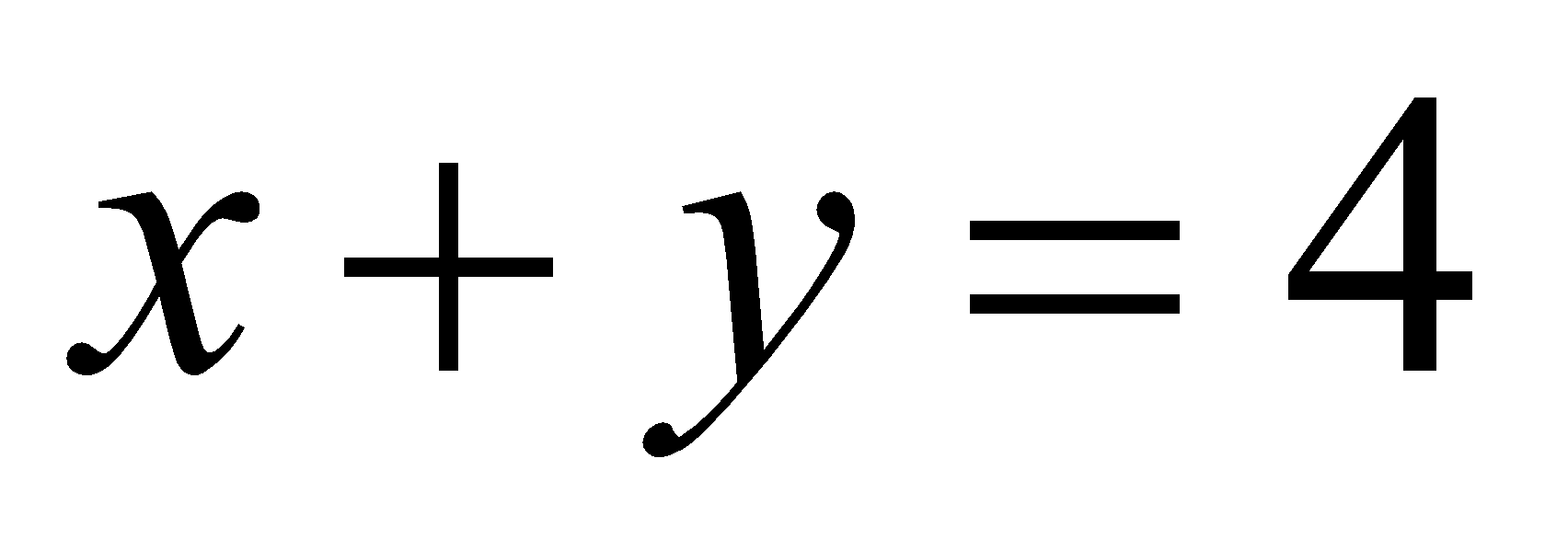
Giải hệ phương trình:

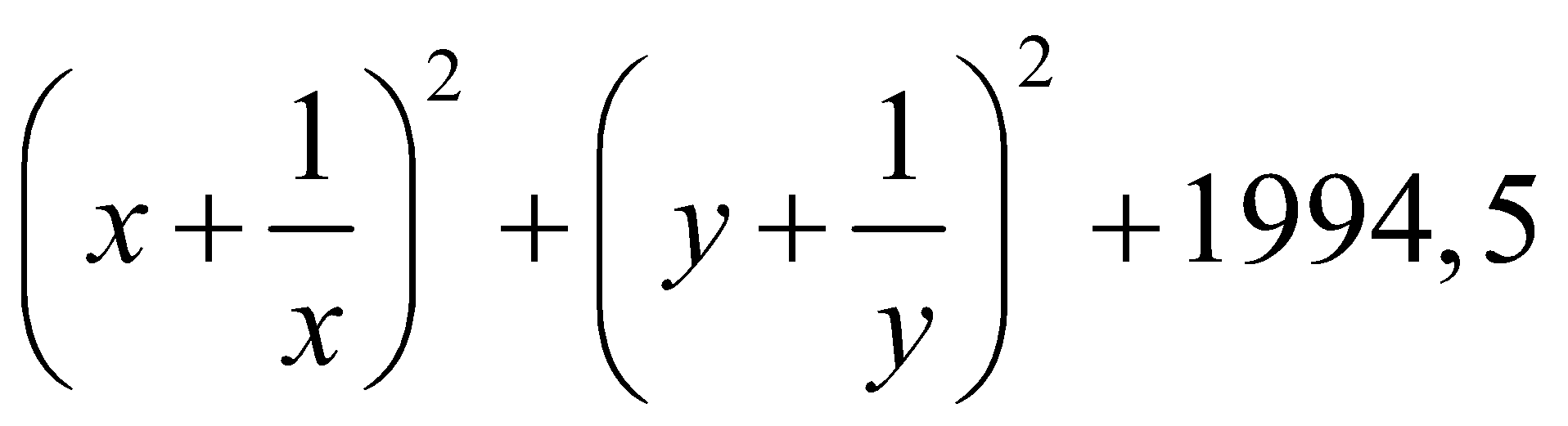


**Bài 3: (3,0 điểm)**

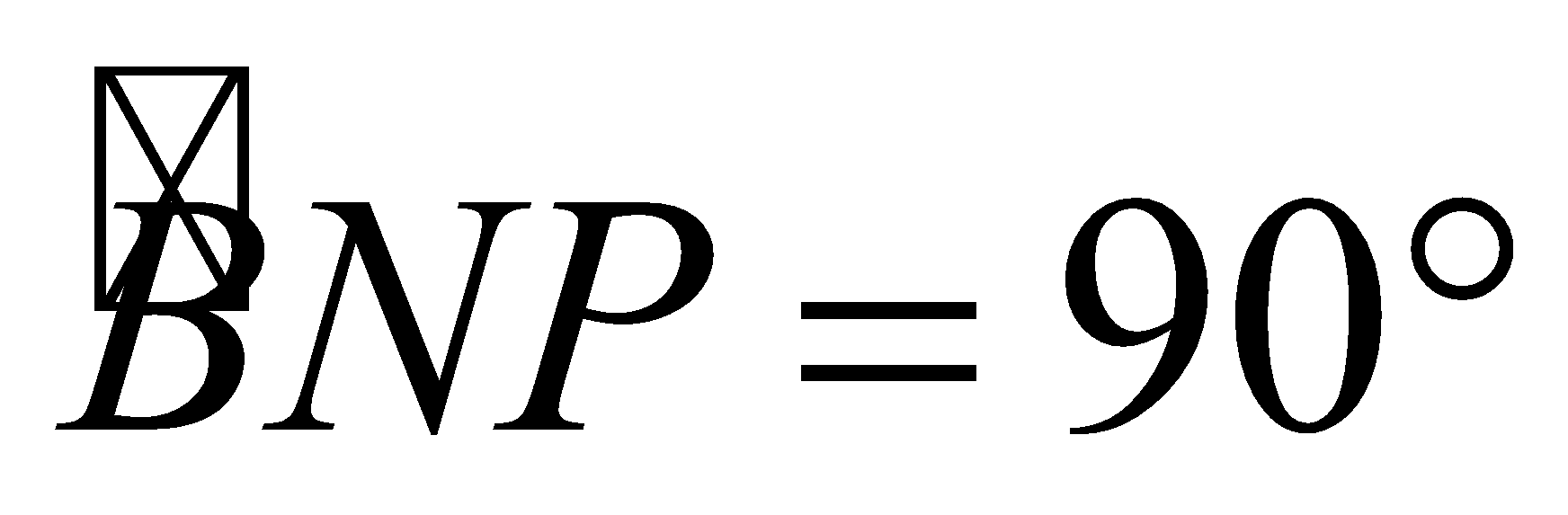
Giải phương trình: 

**Bài 4: (3,0 điểm)**

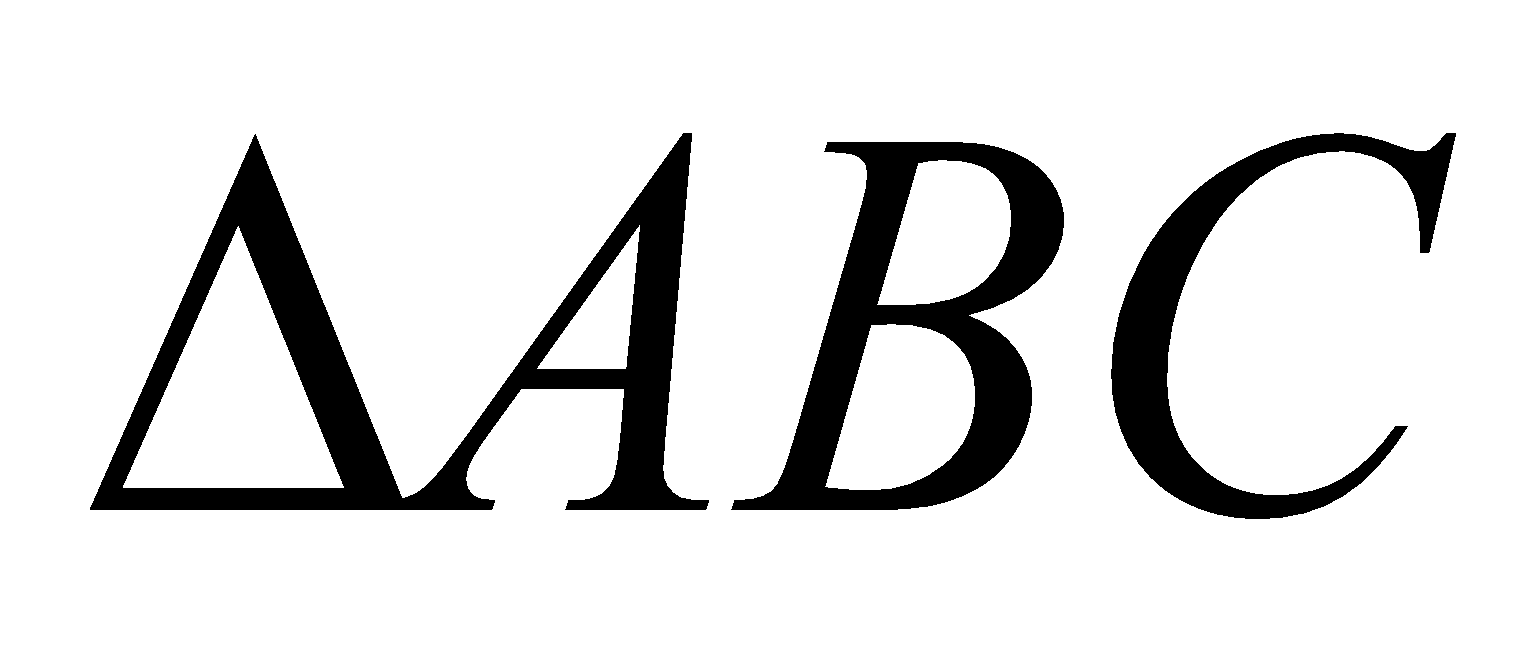
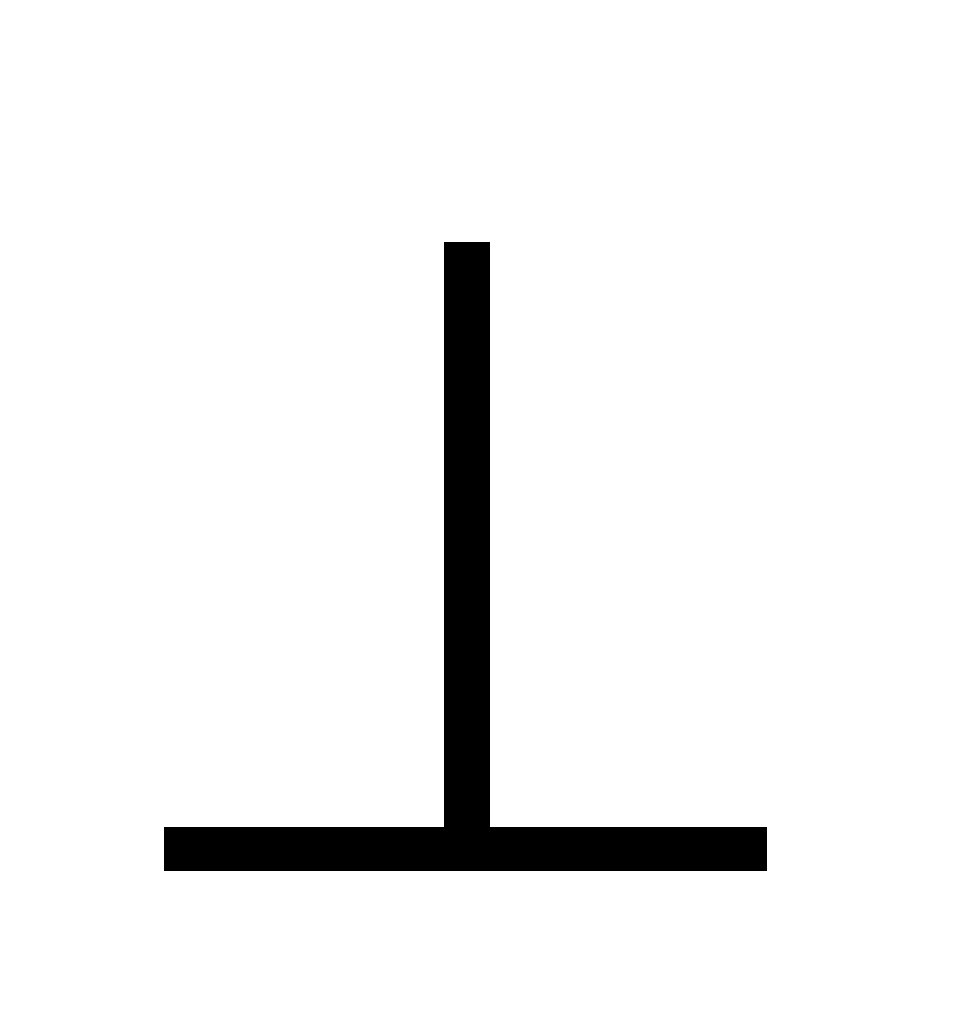
Cho  và 

Tìm giá trị nhỏ nhất của A = .

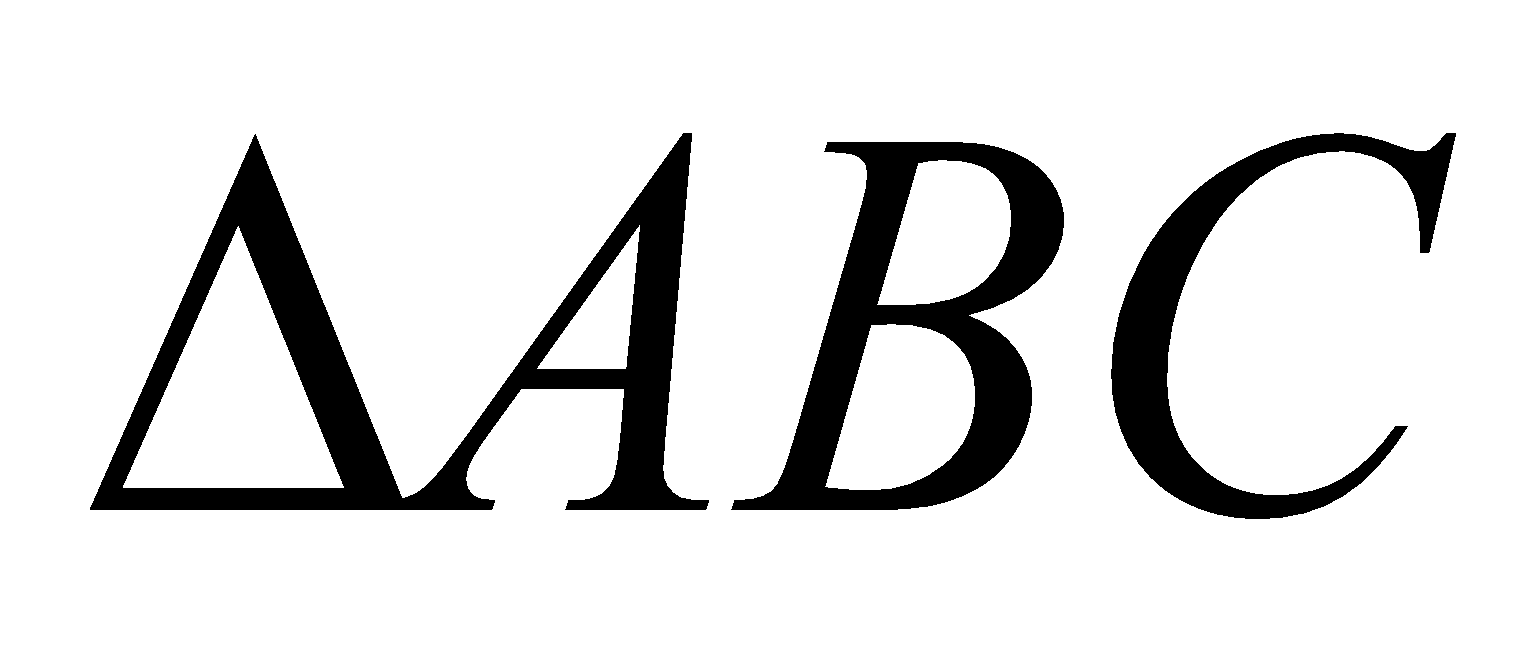
**Bài 5: (3,0 điểm)**

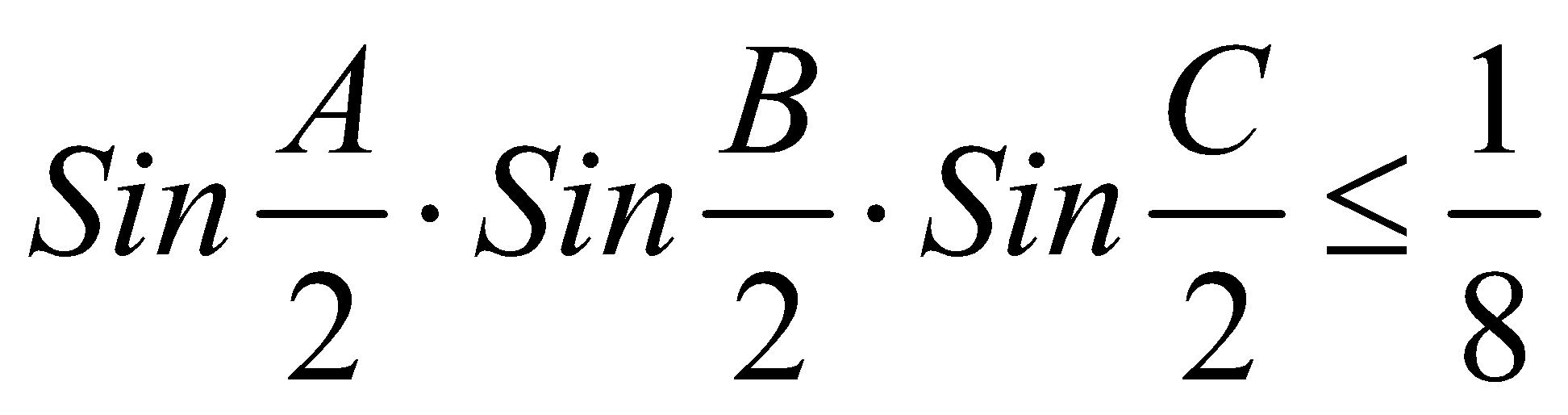
Cho hình chữ nhật ABCD. Kẻ BM vuông góc với AC, gọi N là trung điểm của AM, P là trung điểm của CD. Chứng minh: .

**Bài 6: (3,0 điểm)**

Cho  ( AB = AC). Đường cao AH, kẻ HE vuông góc với AC, gọi O là trung điểm của EH. Chứng minh: AO  BE

**Bài 7: (3,0 điểm)**

Cho  Có AB = c, AC = b, BC = a.

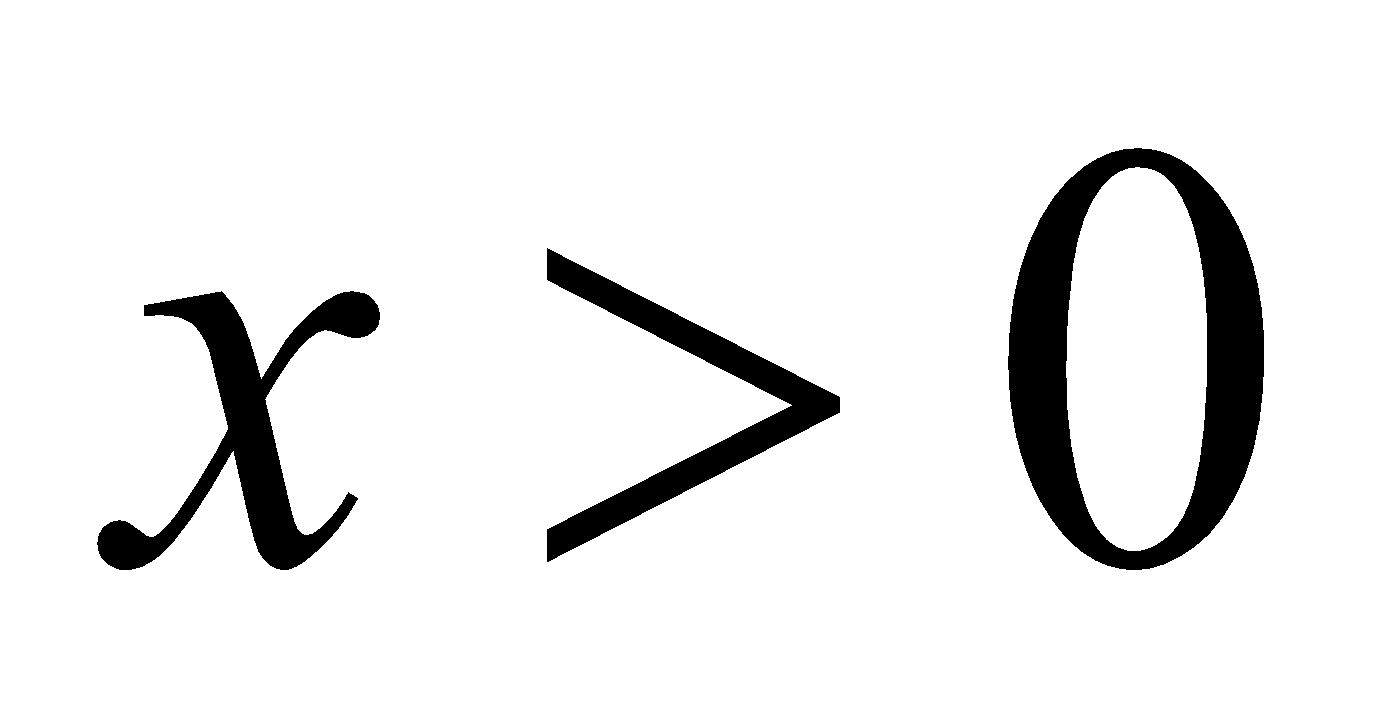
Chứng minh rằng: 

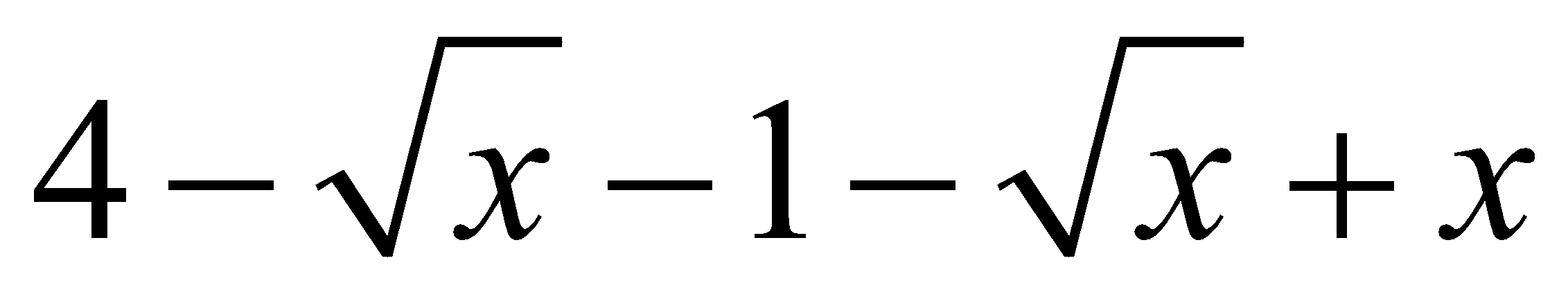
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Hết \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

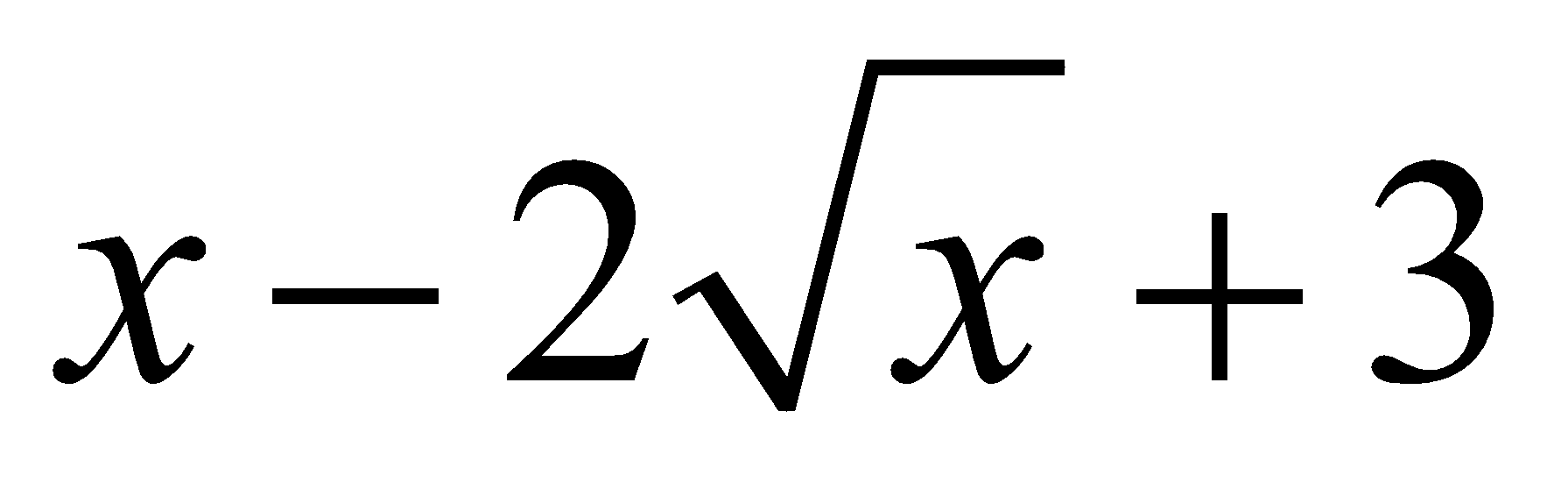
PGD KRÔNG PẮC ĐÁP ÁN ĐỀ THI HSG CẤP HUYỆN – NĂM

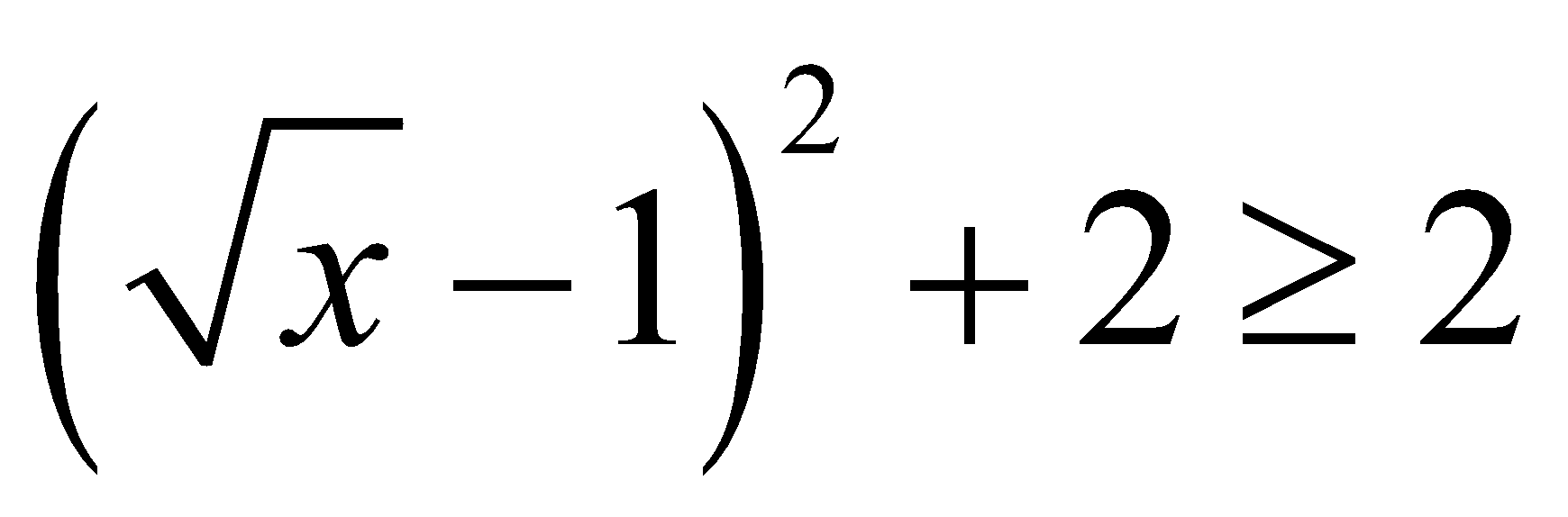
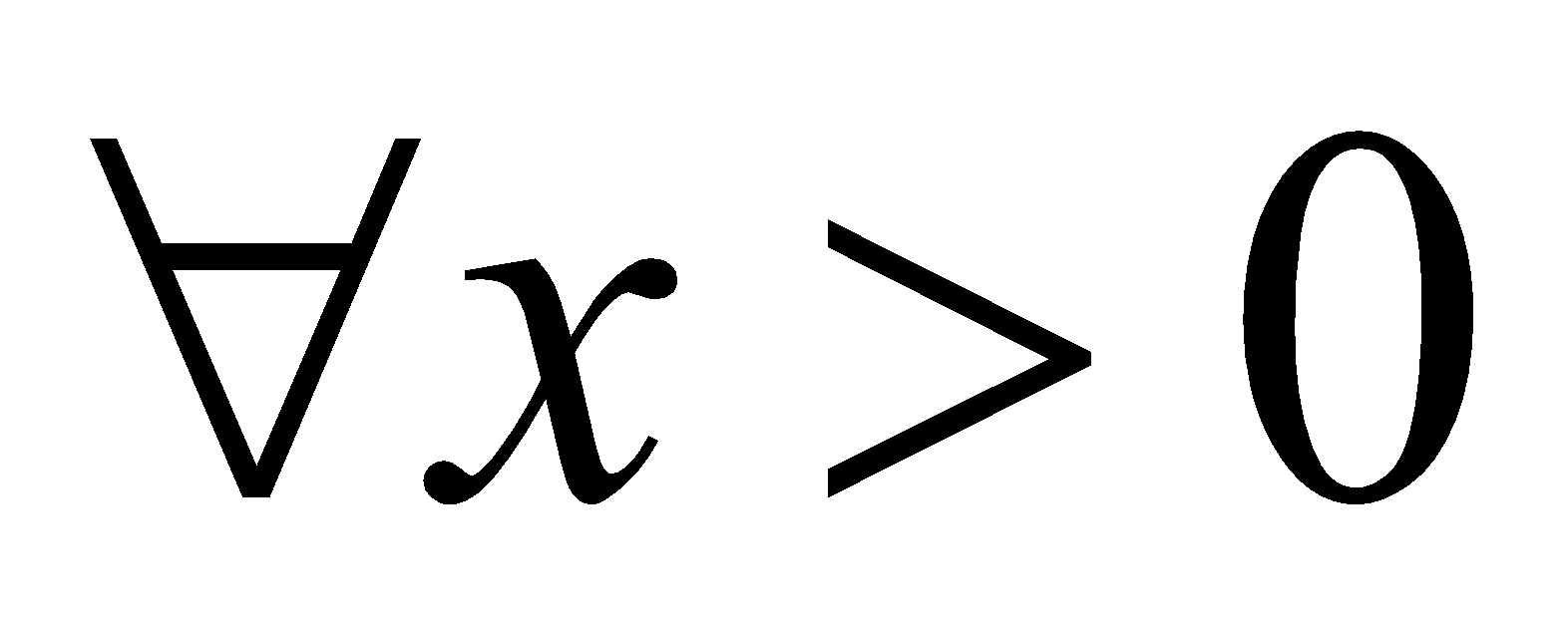
Môn : Toán- Lớp 9

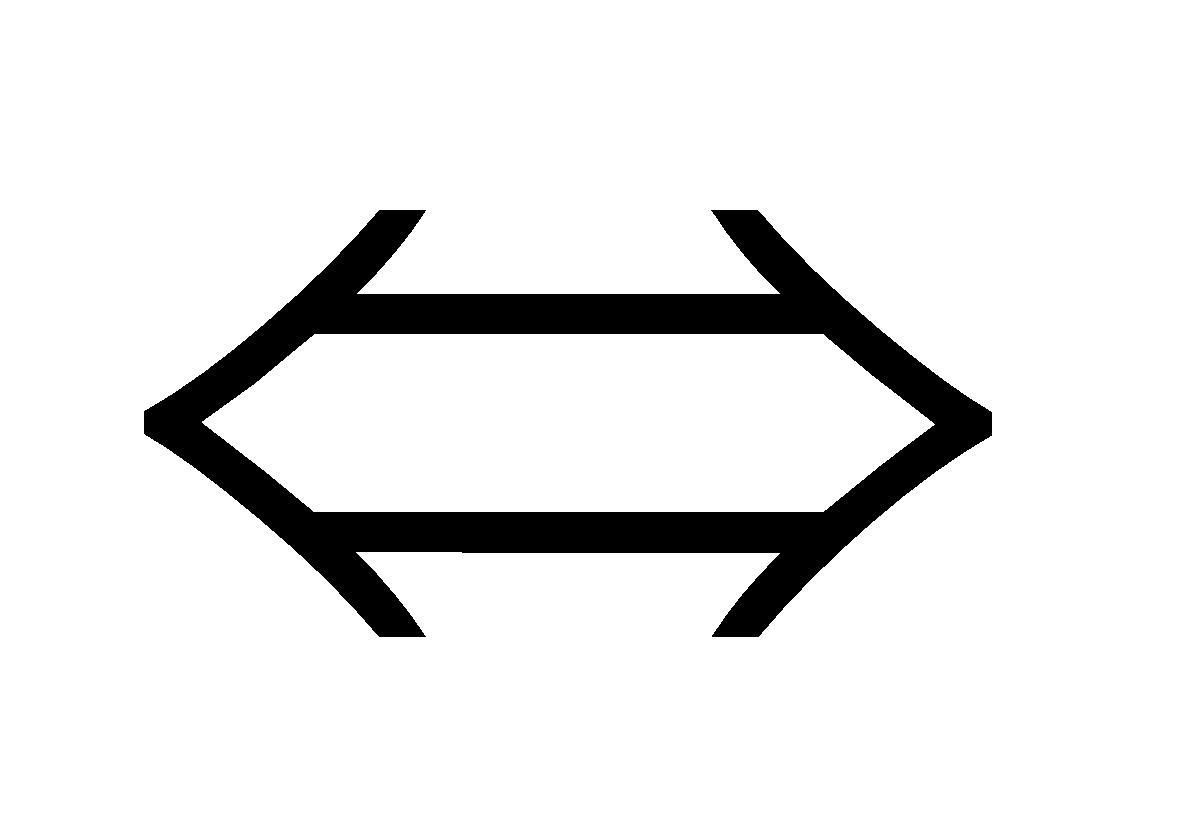
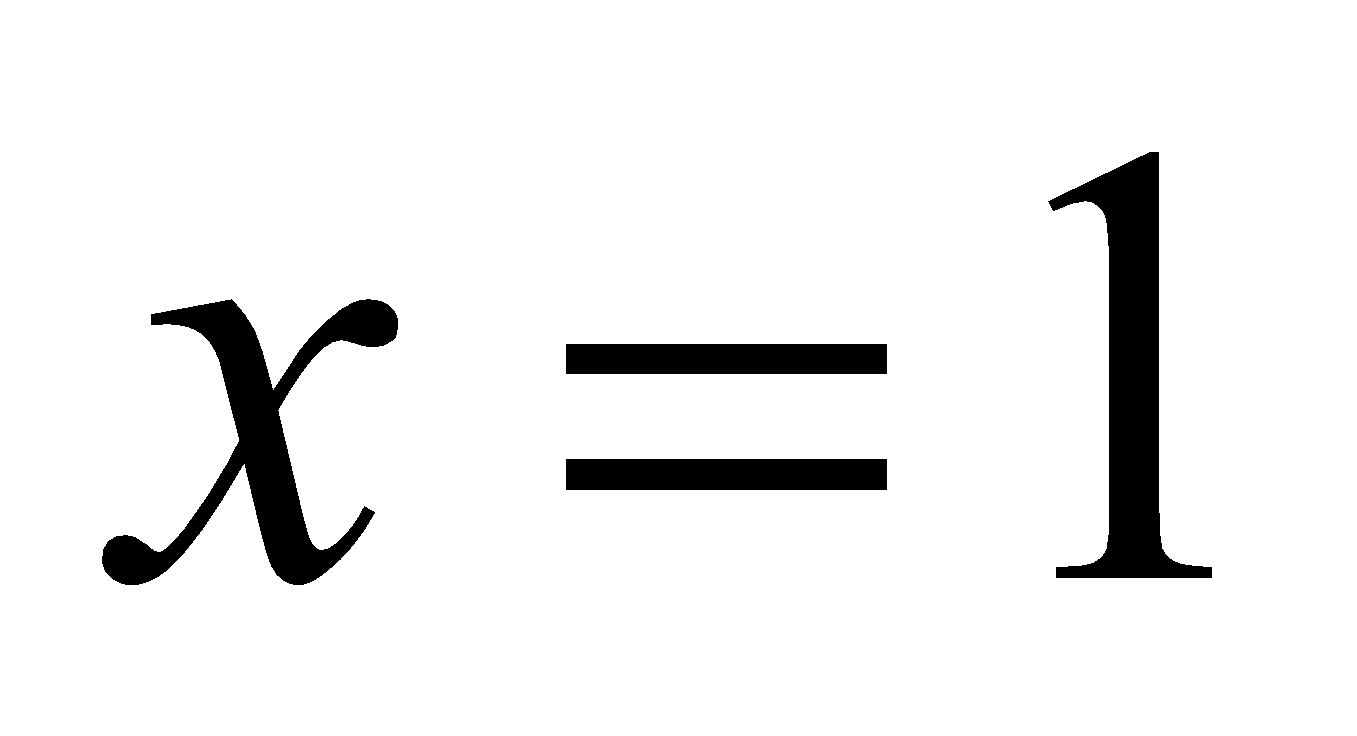
*Thời gian làm bài : 150 phút*

Bài 1: a) Đ/K:  0.5 điểm

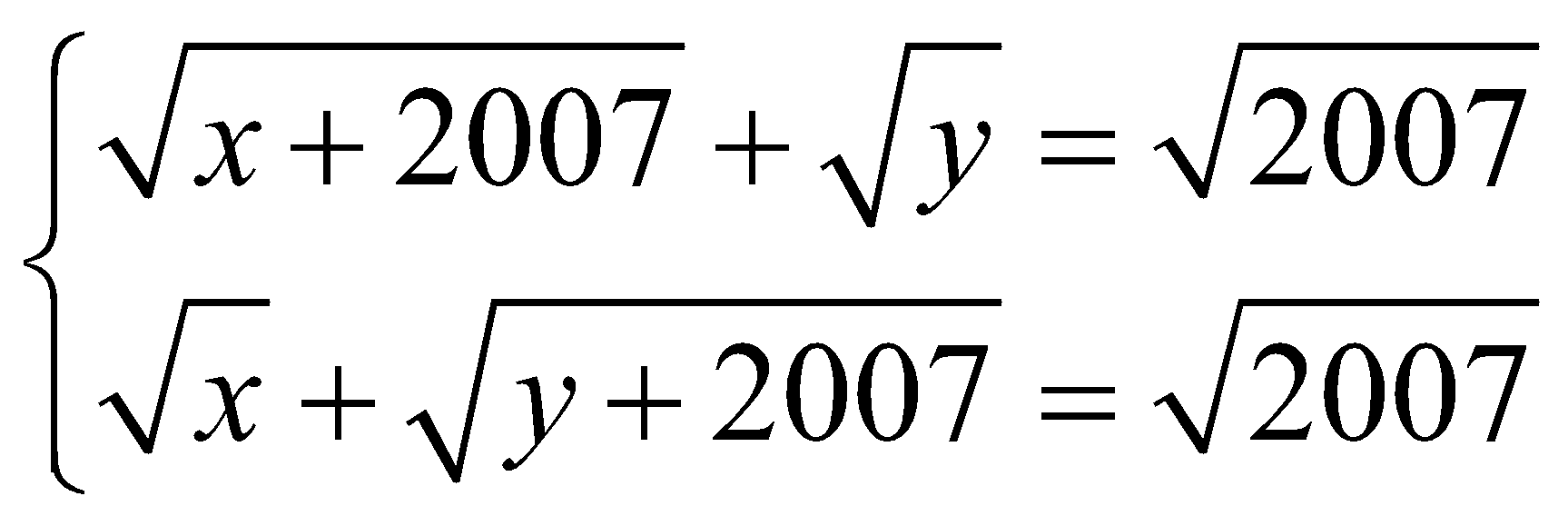
A =  0.5 điểm

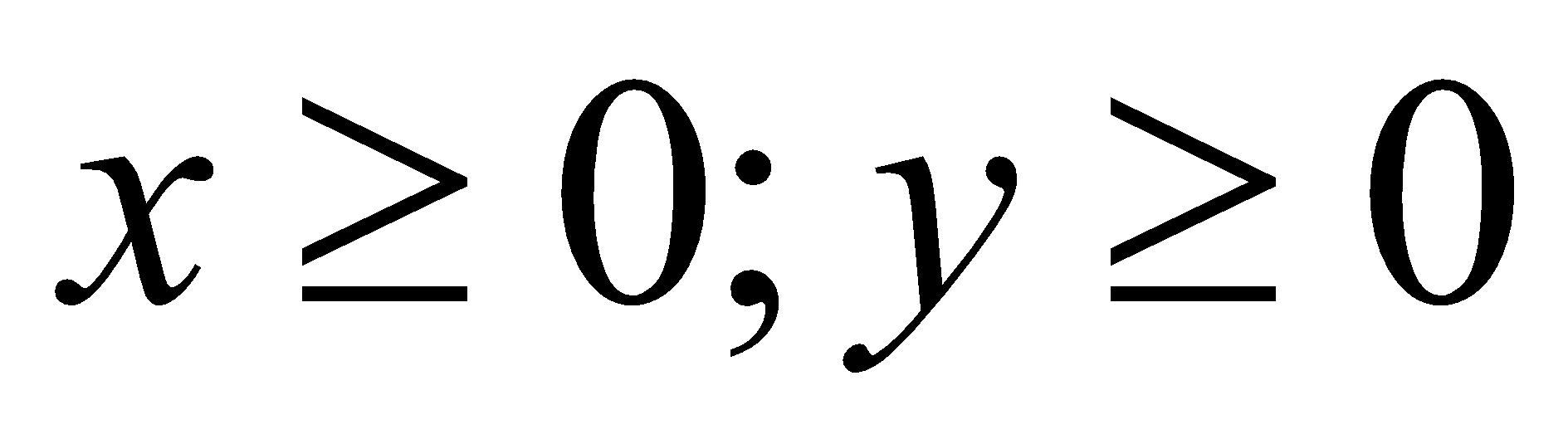
=  0.5 điểm

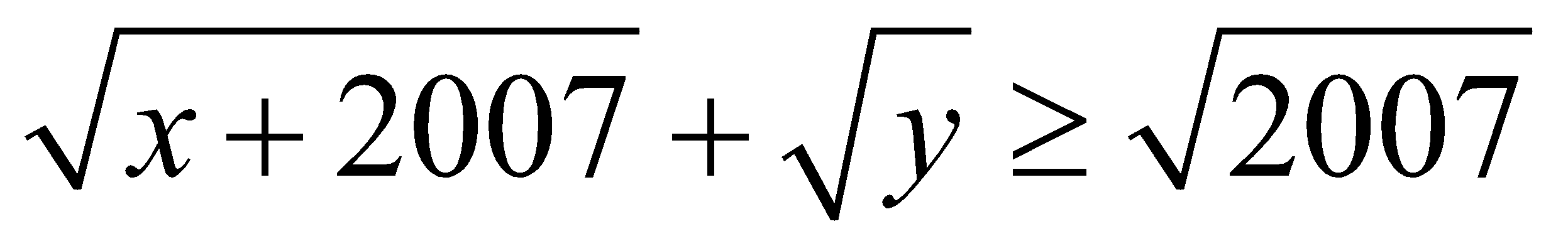
b) A =   0.5 điểm

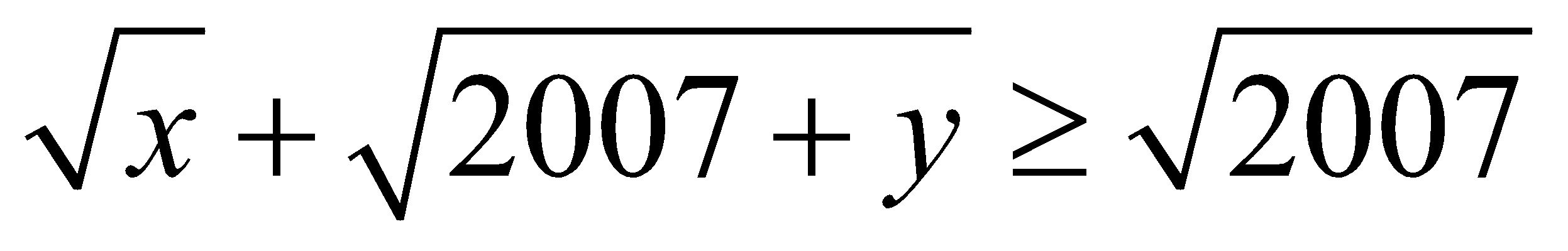
MinA = 2  (TMĐK) 1.0 điểm

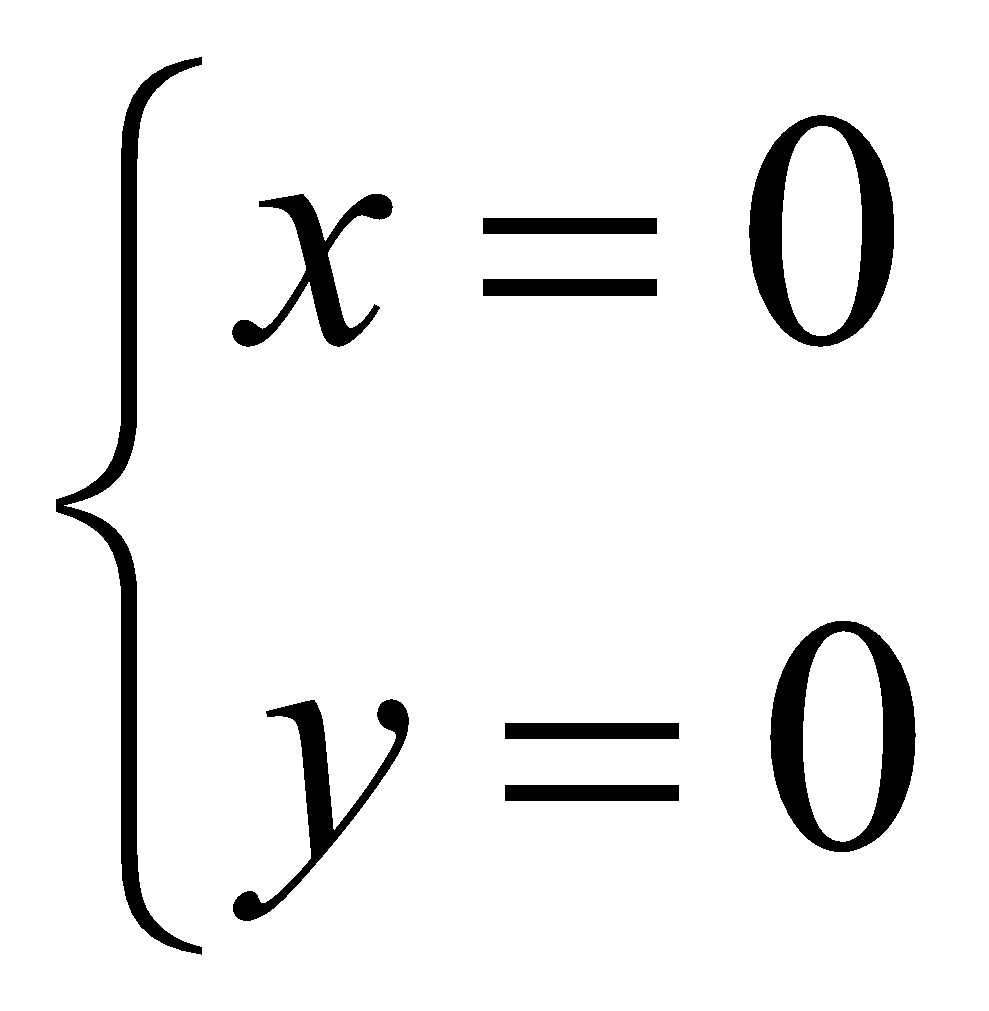
Bài 2:

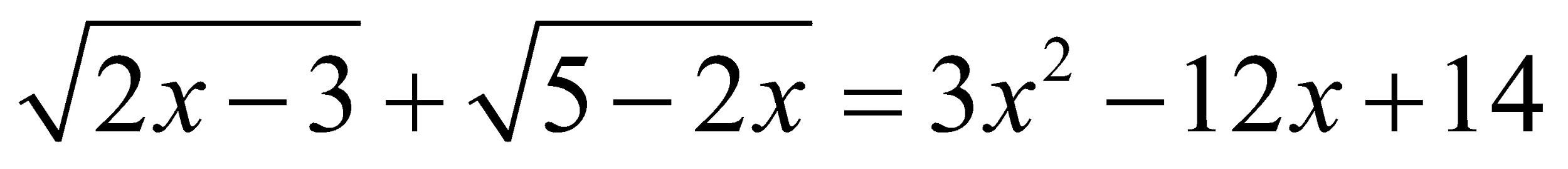


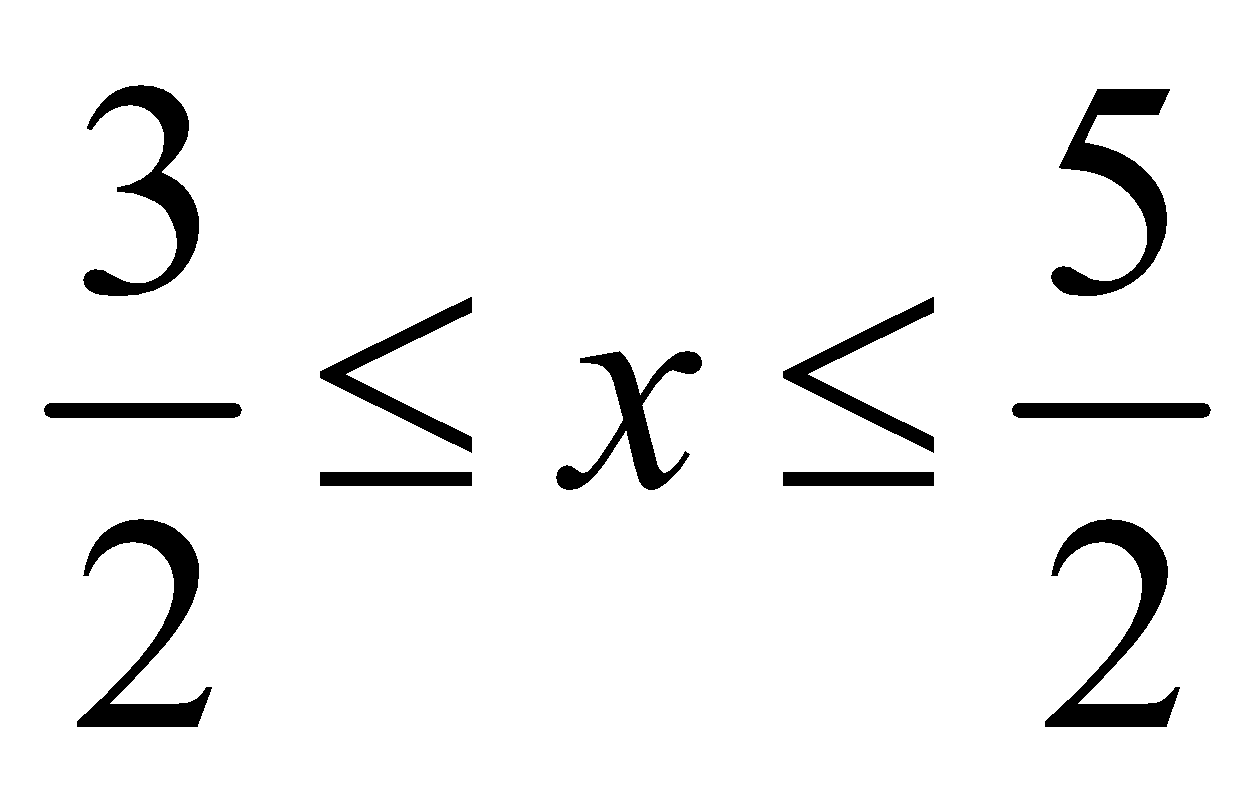
**Đ**K:  0.5 điểm

  0.5 điểm

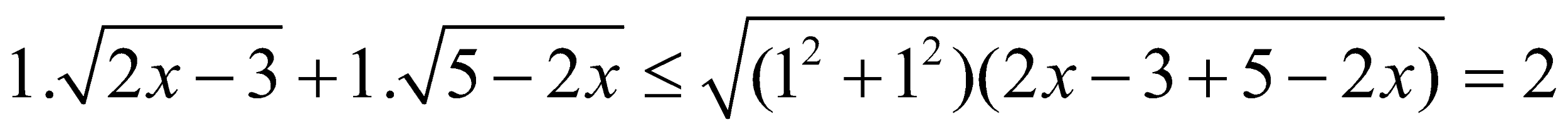
 0.5 điểm

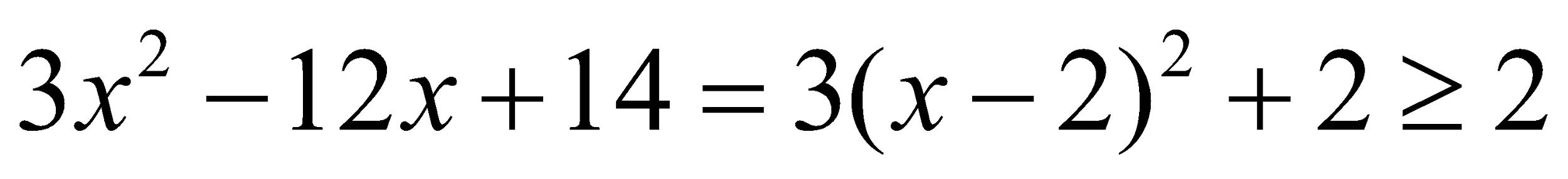
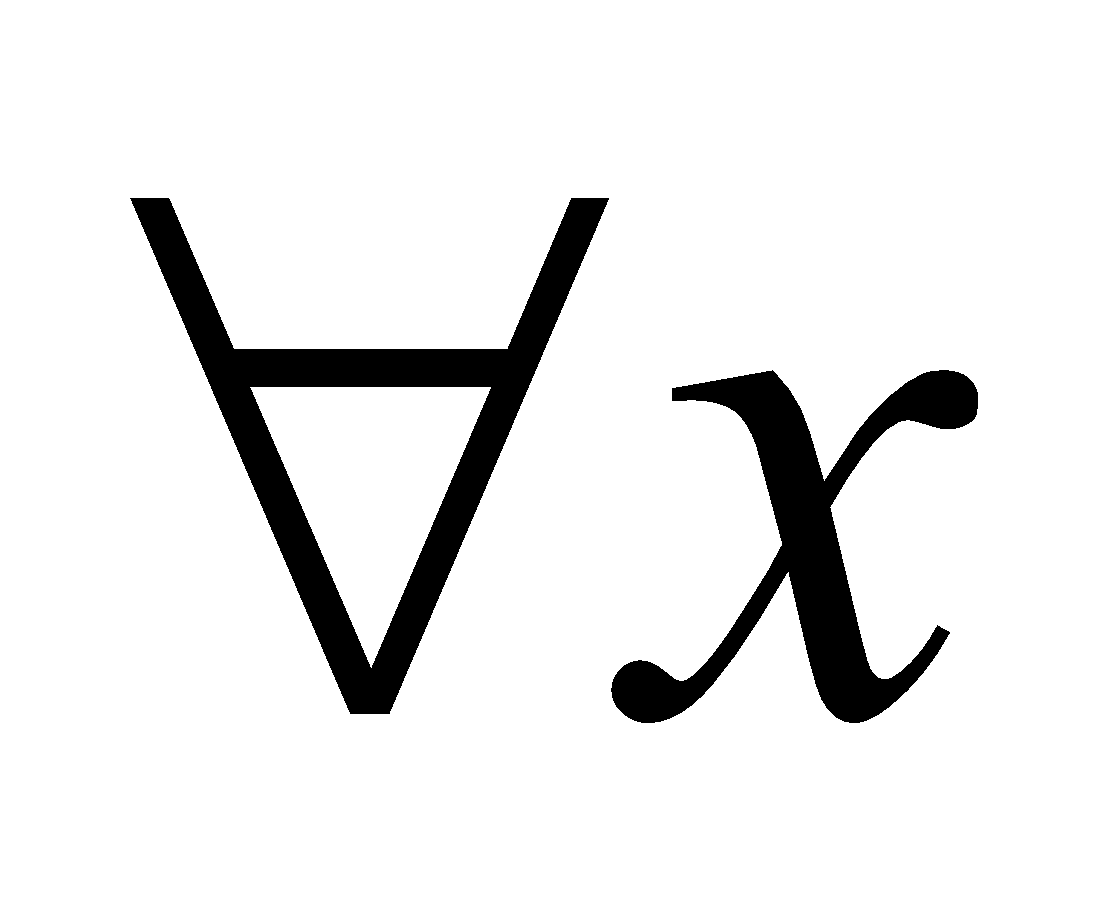
Do đó hệ phương trình có nghiệm duy nhất  0.5 điểm

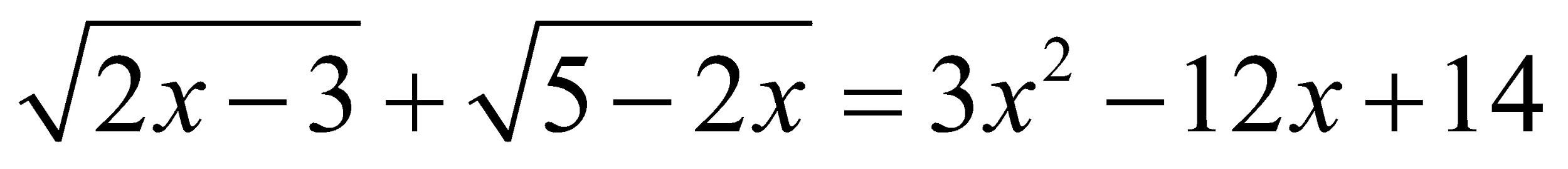
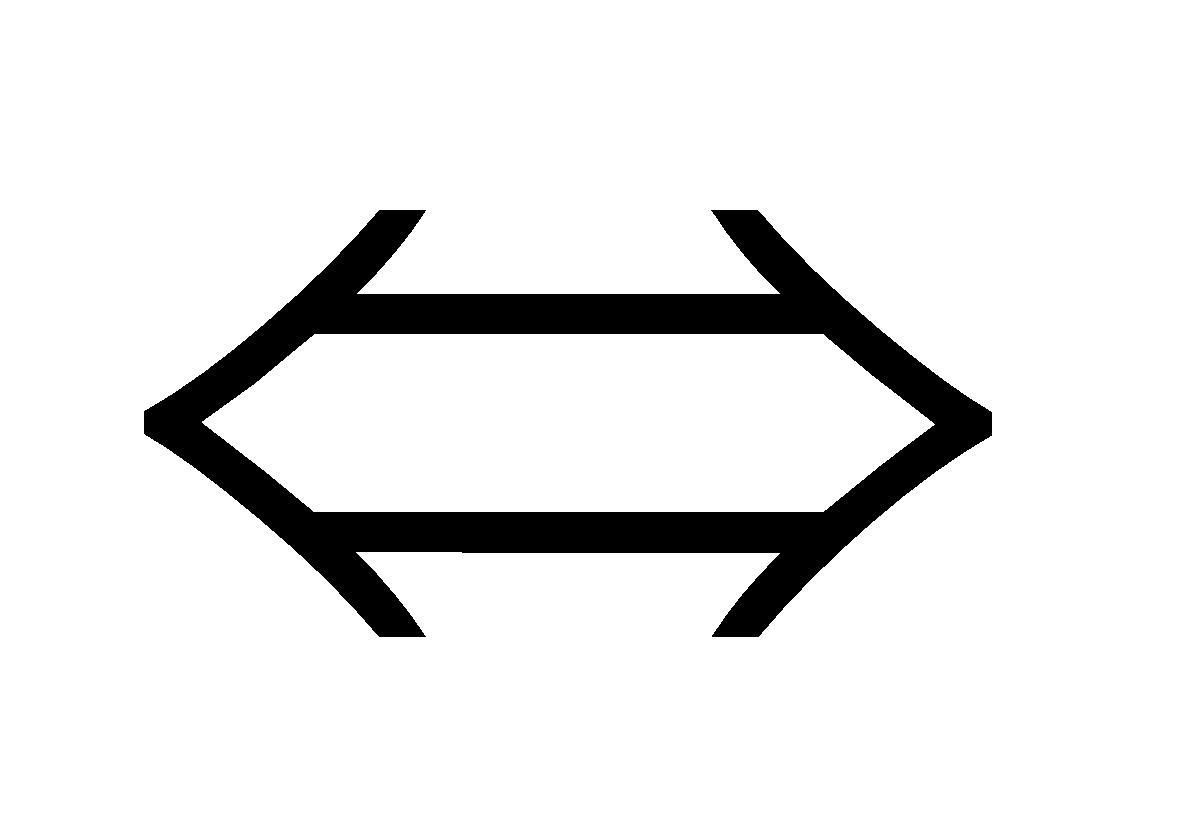
Bài 3: 

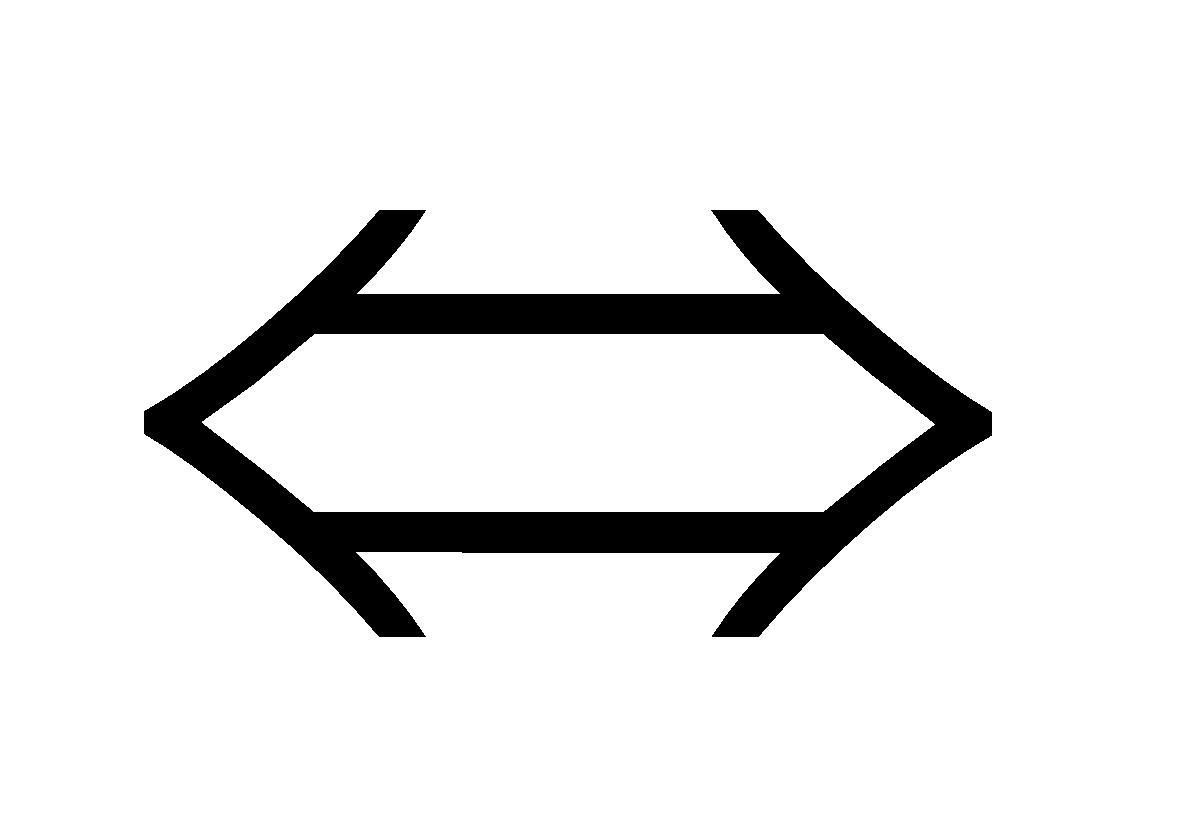
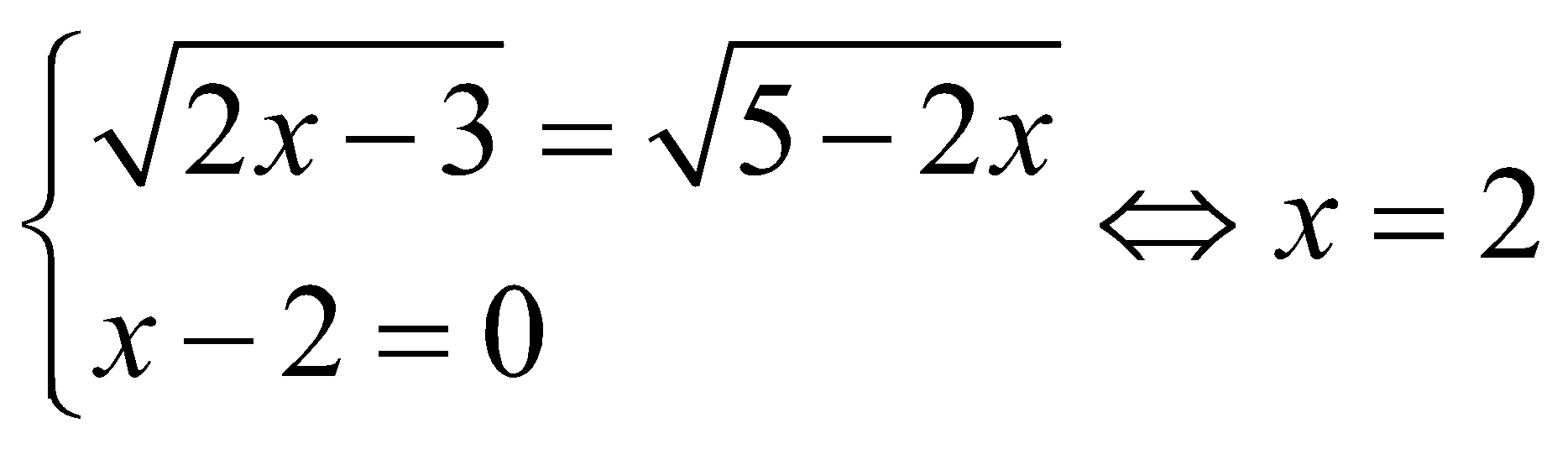
ĐK:  0.5 điểm

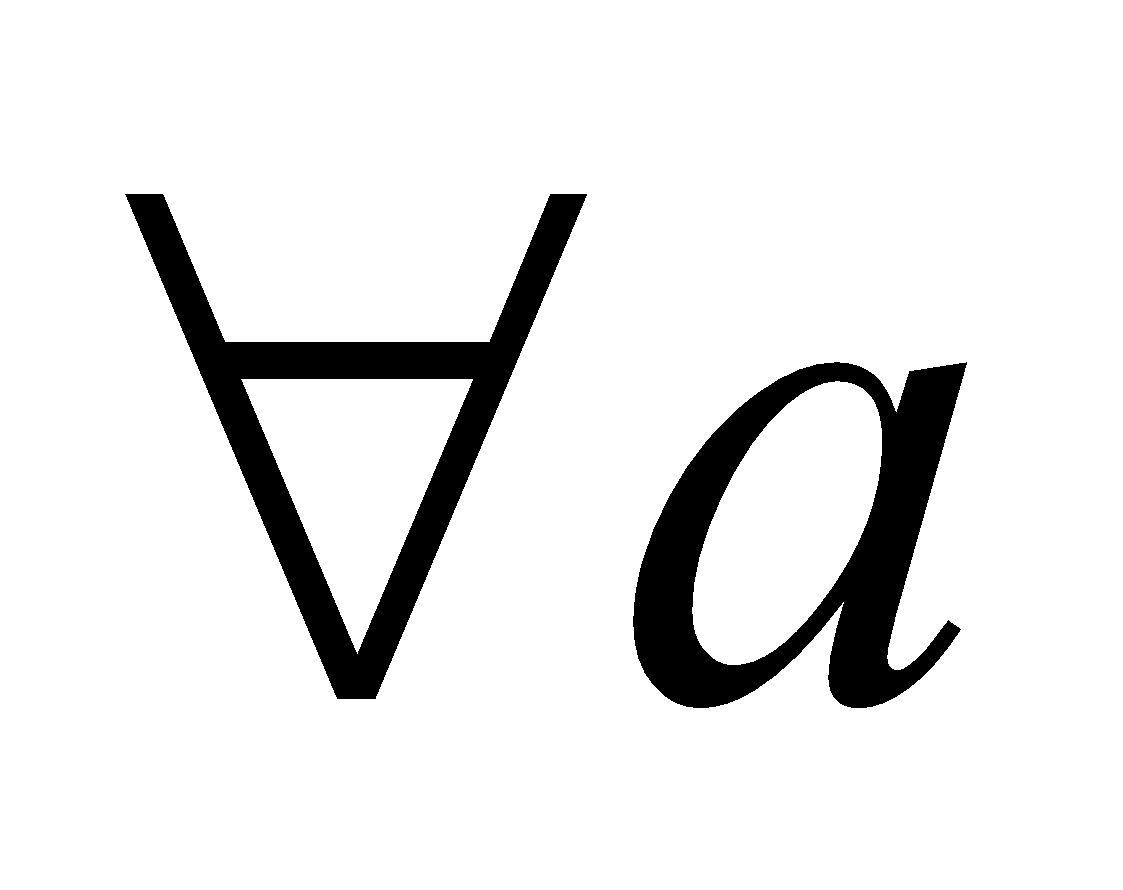
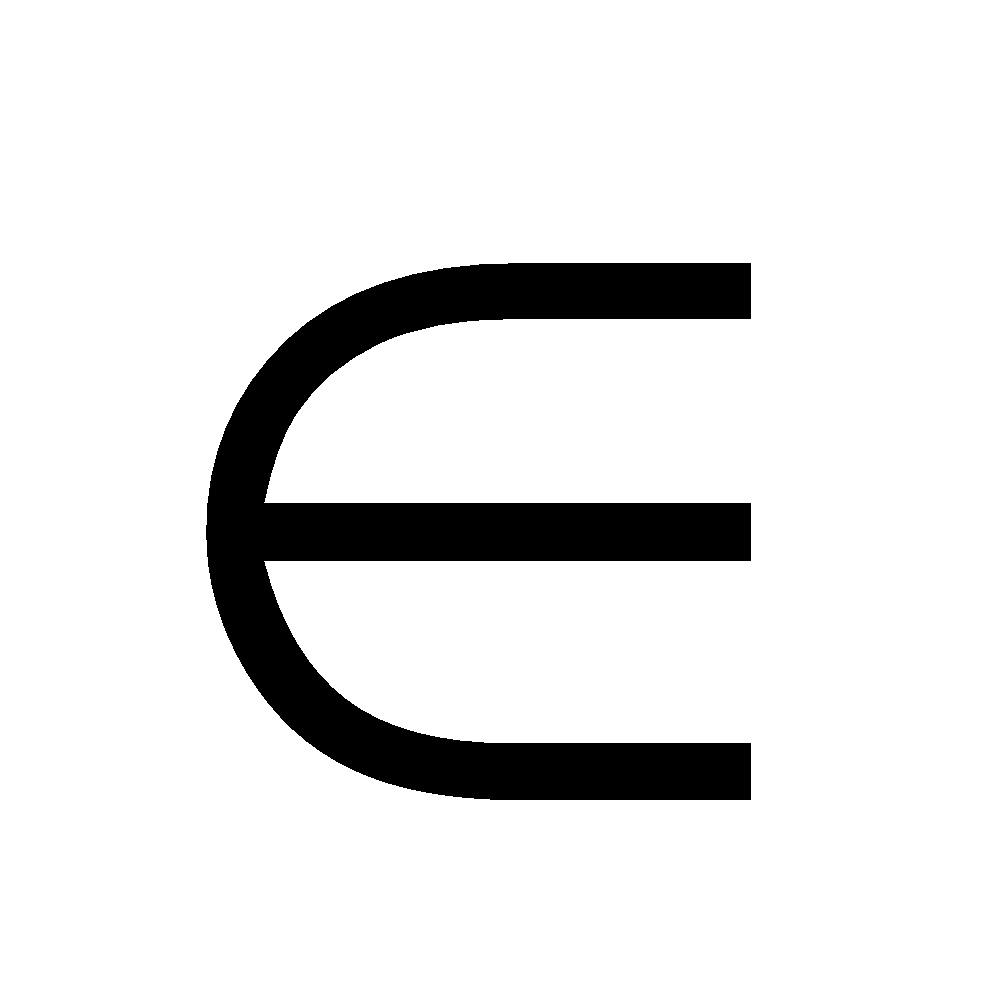
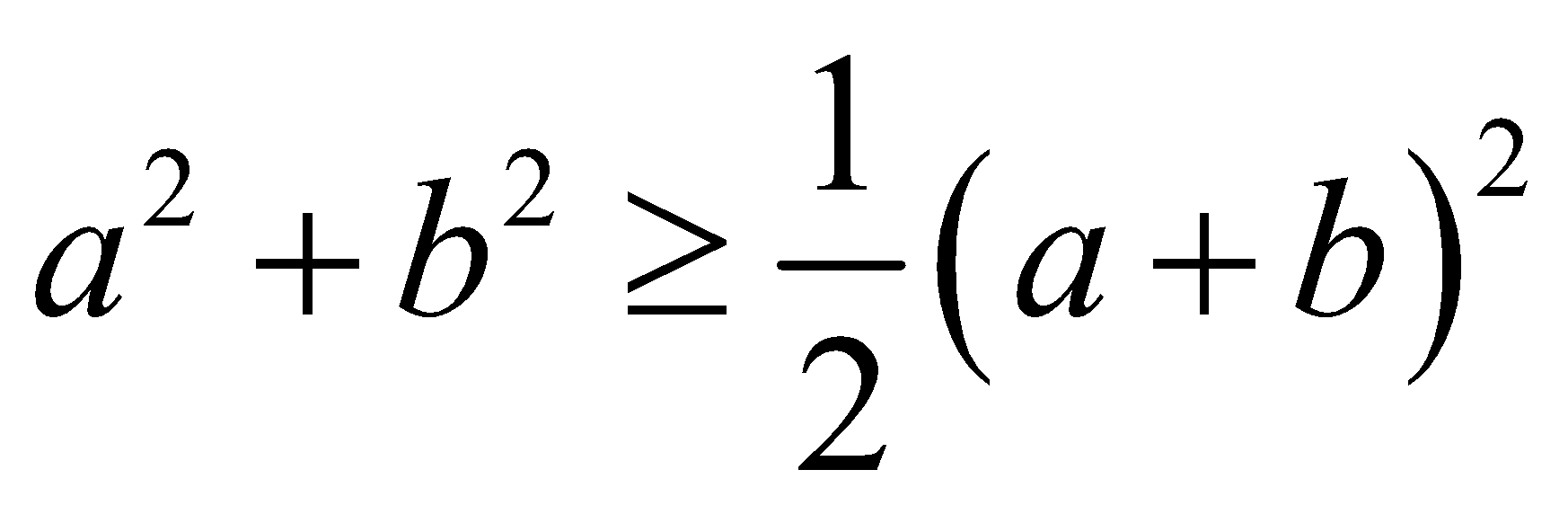
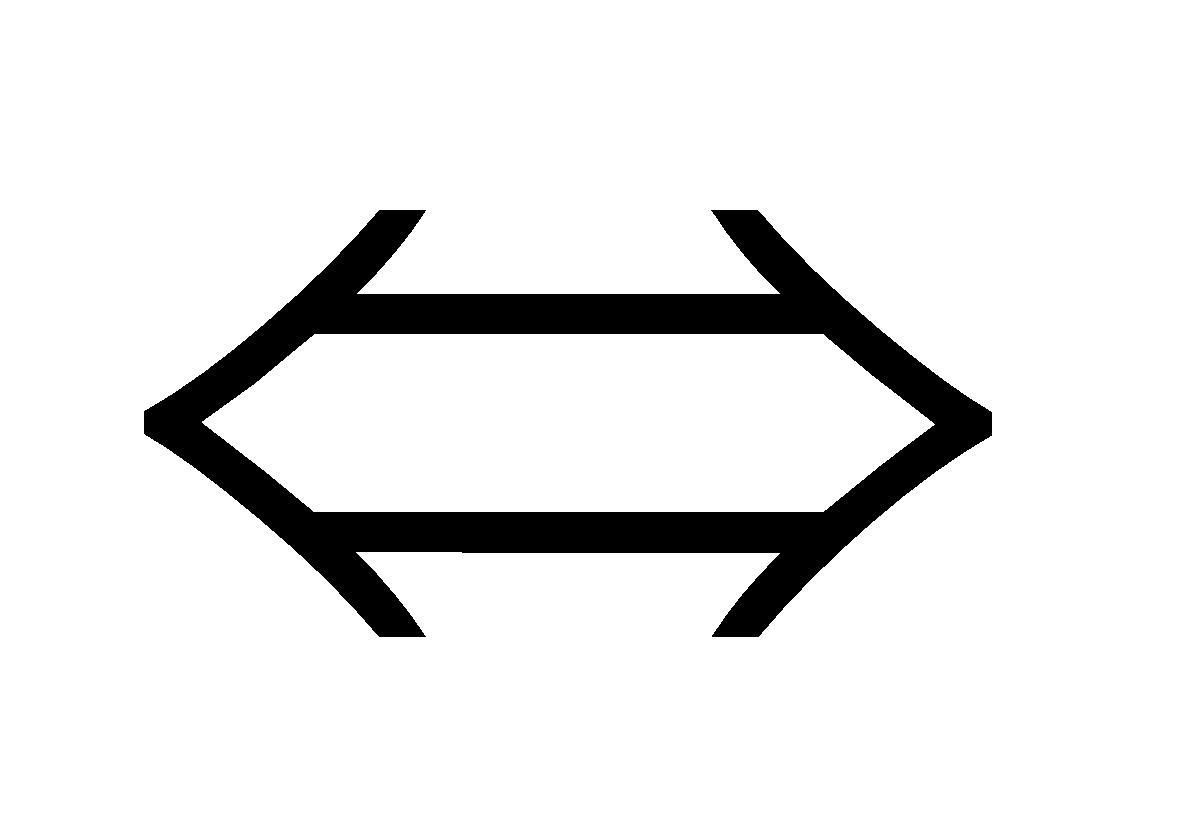
Áp dụng Bunnhiacopski

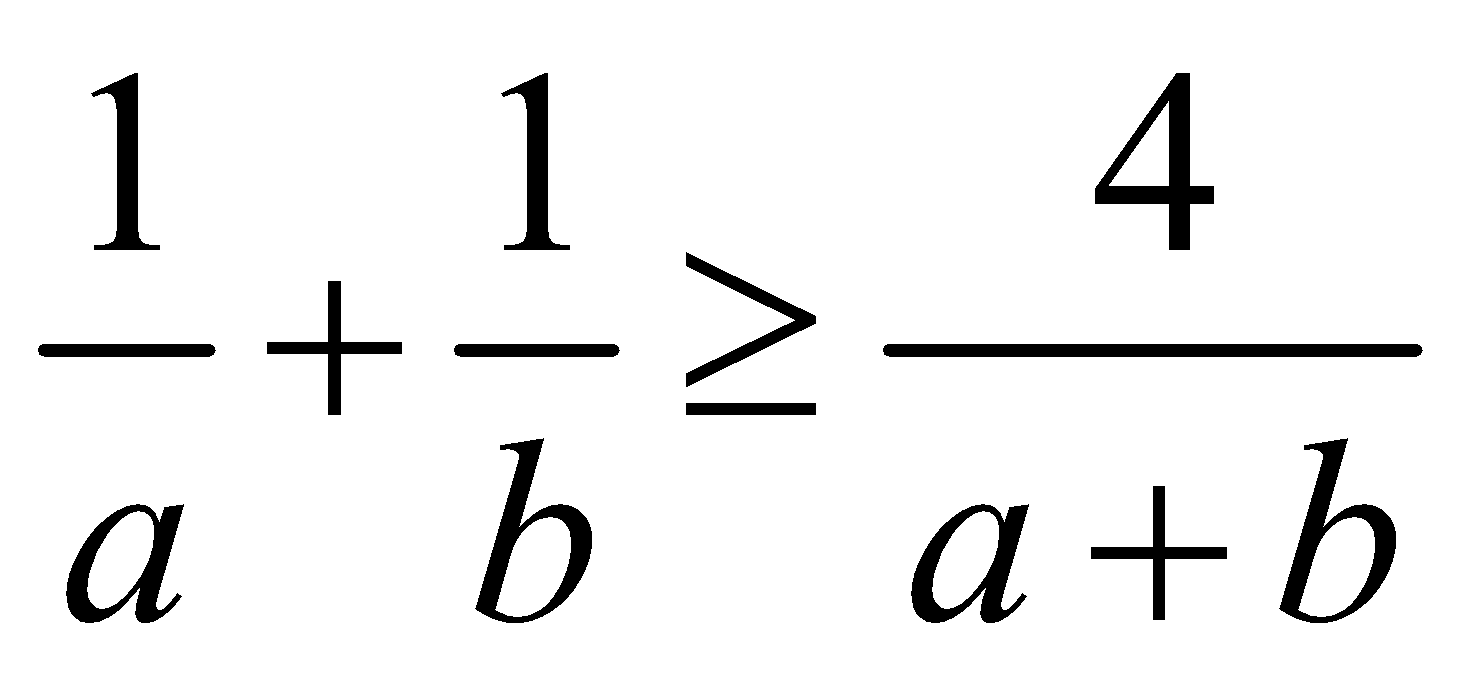
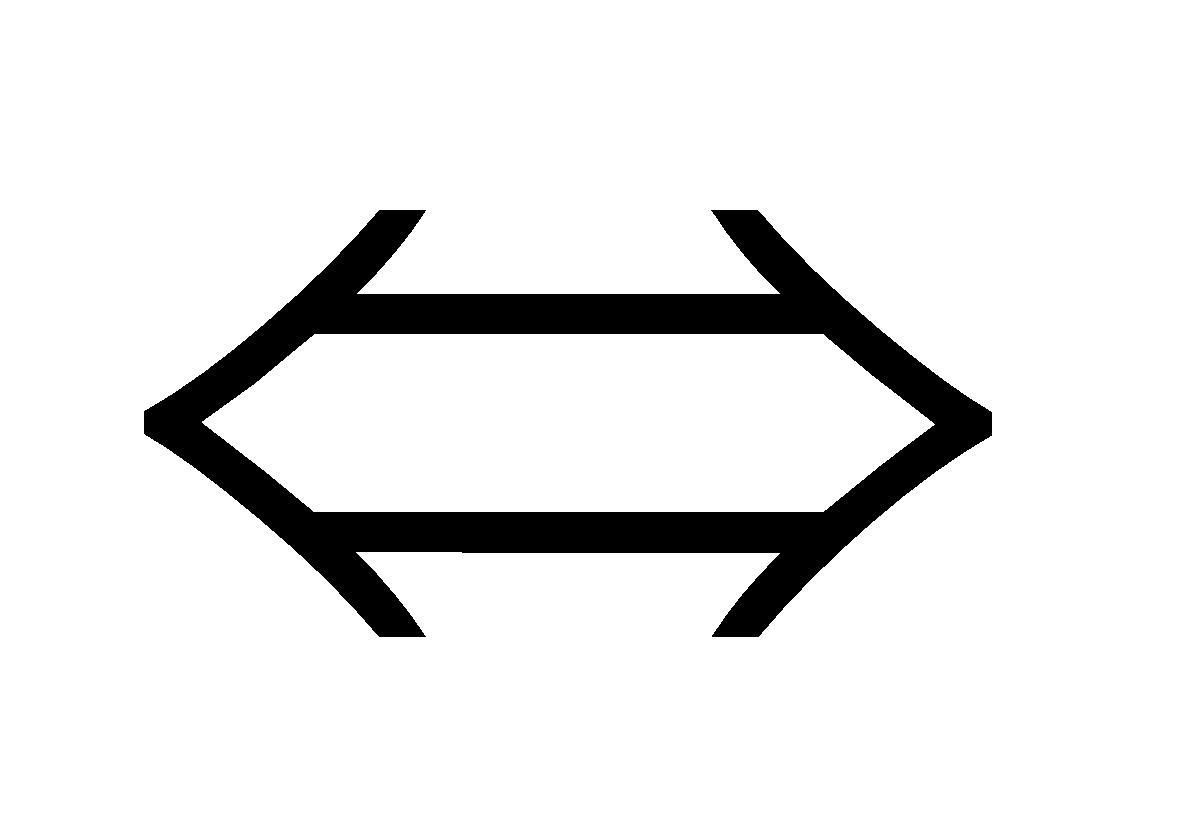
VT:  (1) 0.5 điểm

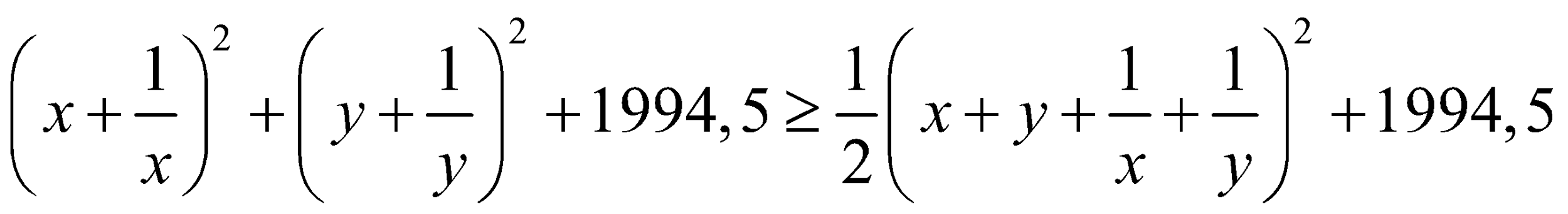
VP:   (2) 0.5 điểm

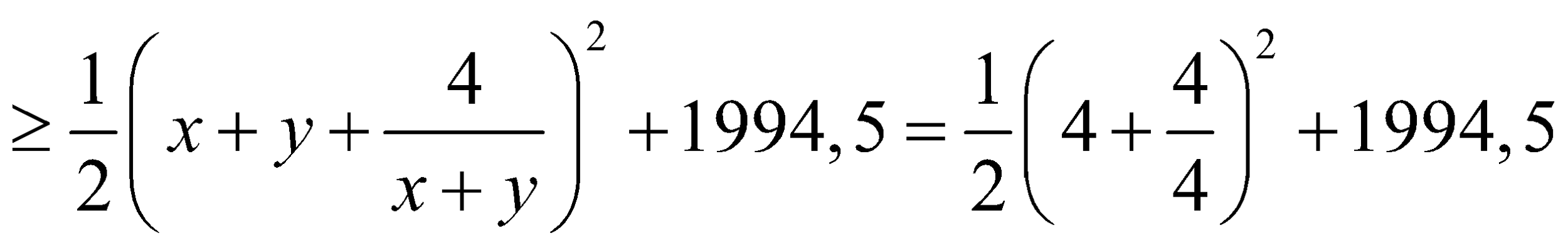
 Phương trình:  có nghiệm Dấu “=” xảy ở (1) và (2) đồng thời xảy ra.

  1.5 điểm

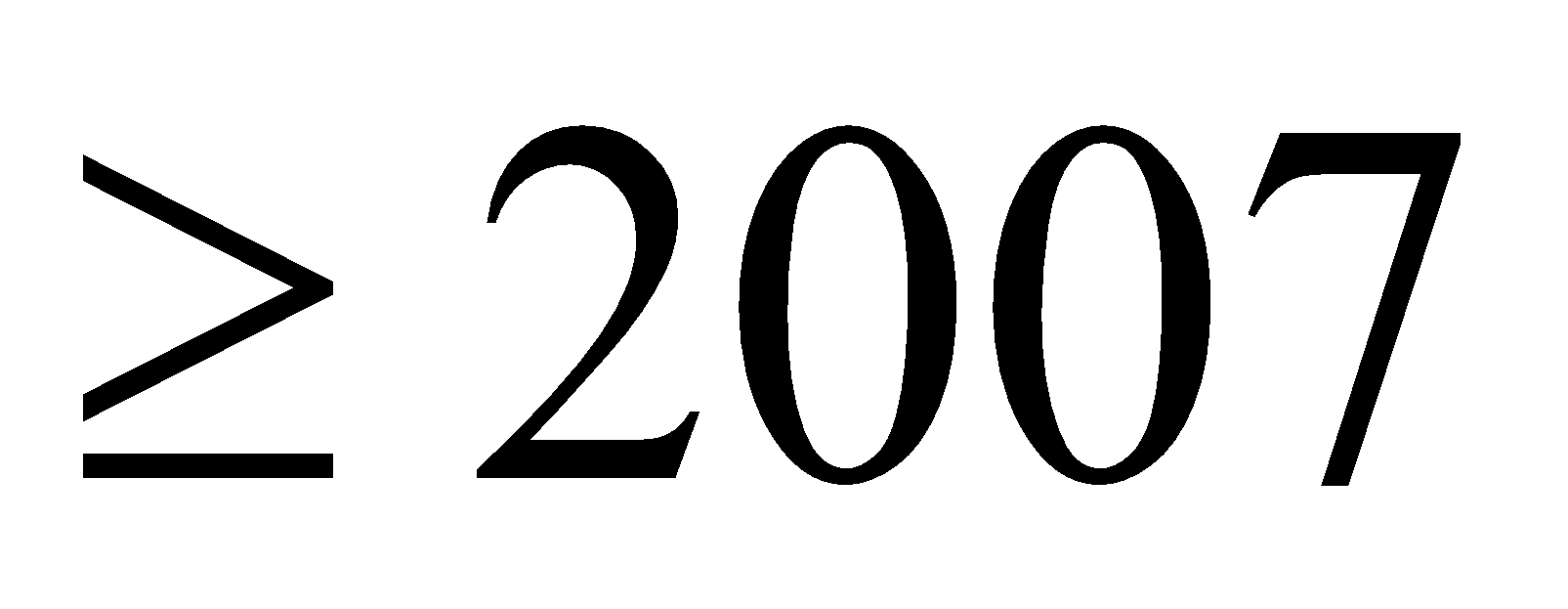
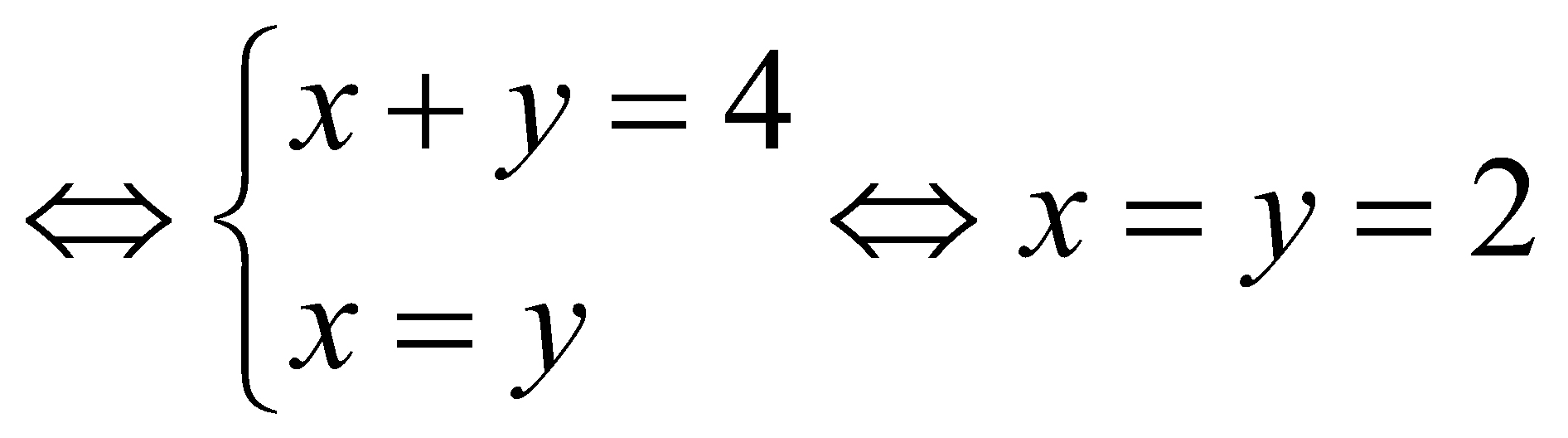
Bài 4: ,b R+ thì  dấu “=”a = b

 Dấu “=” xảy ra  a = b. 0.5 điểm

A = 



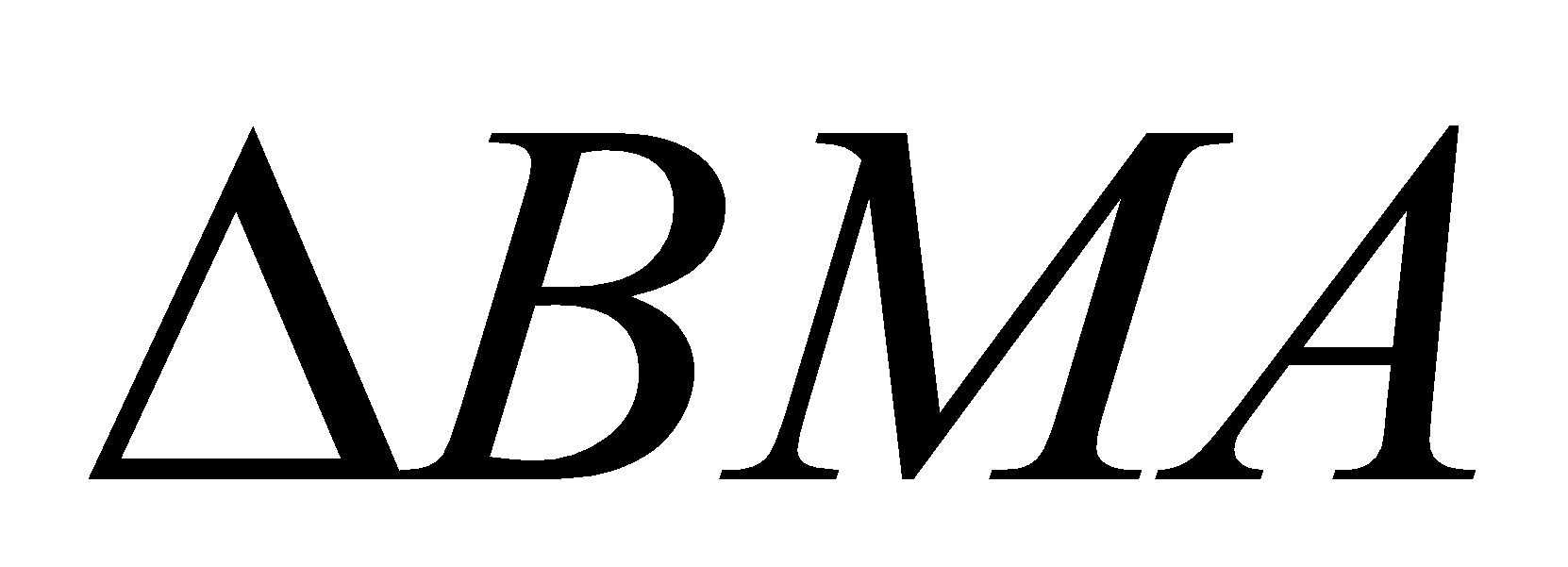
= 2007 1.0 điểm

 A  Do đó MinA = 2007  0.5 điểm

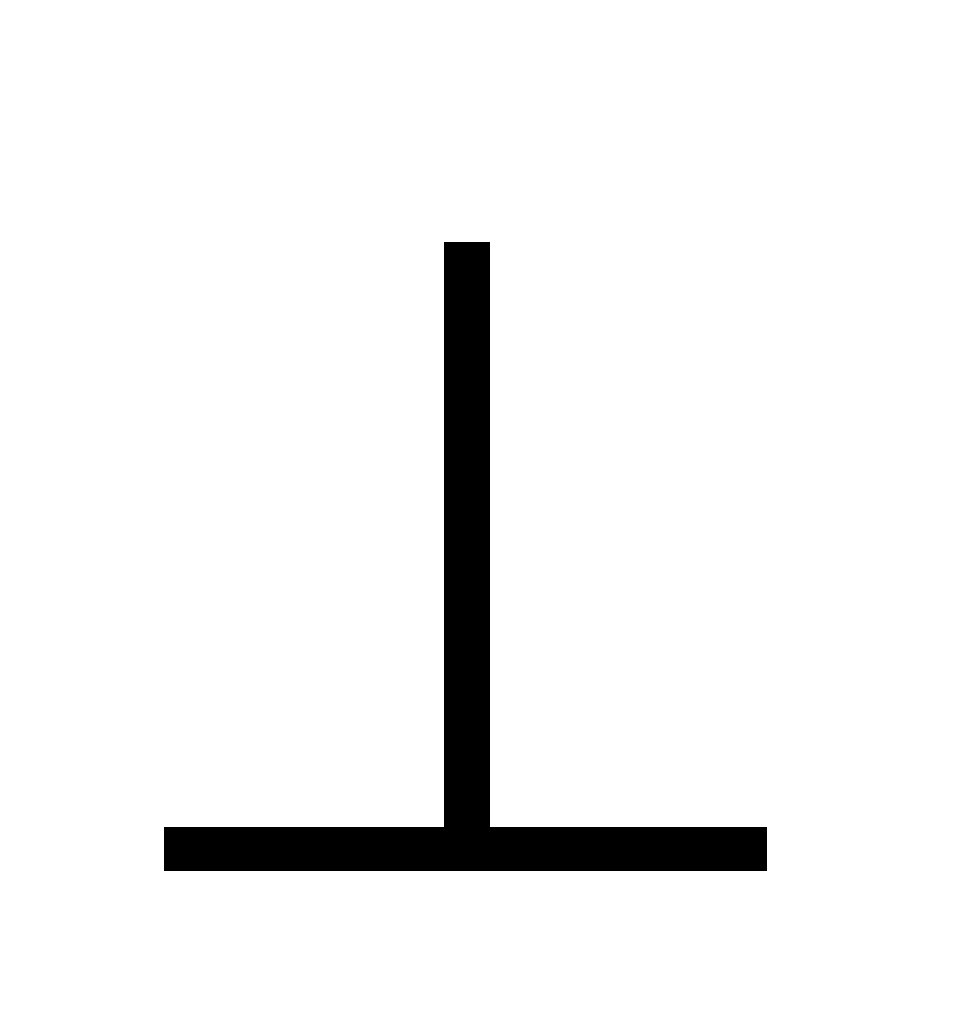
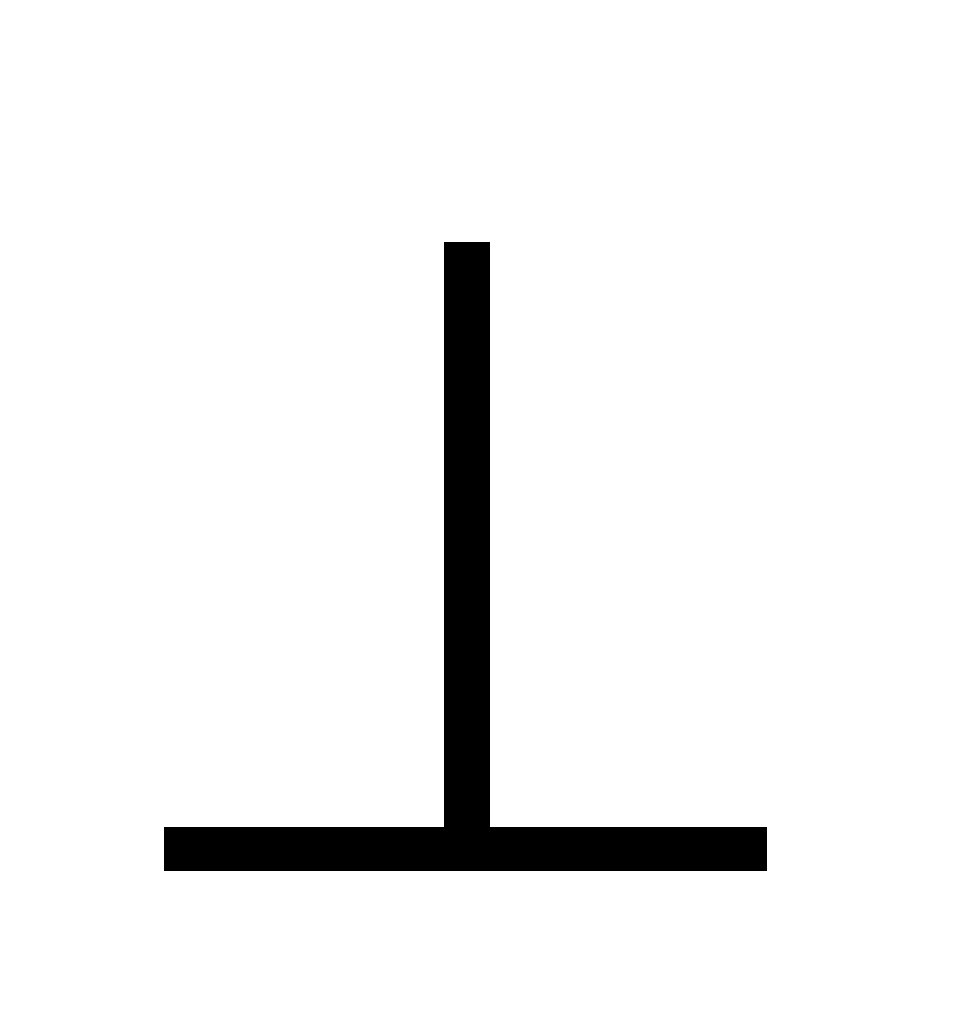
**Bài 5:**

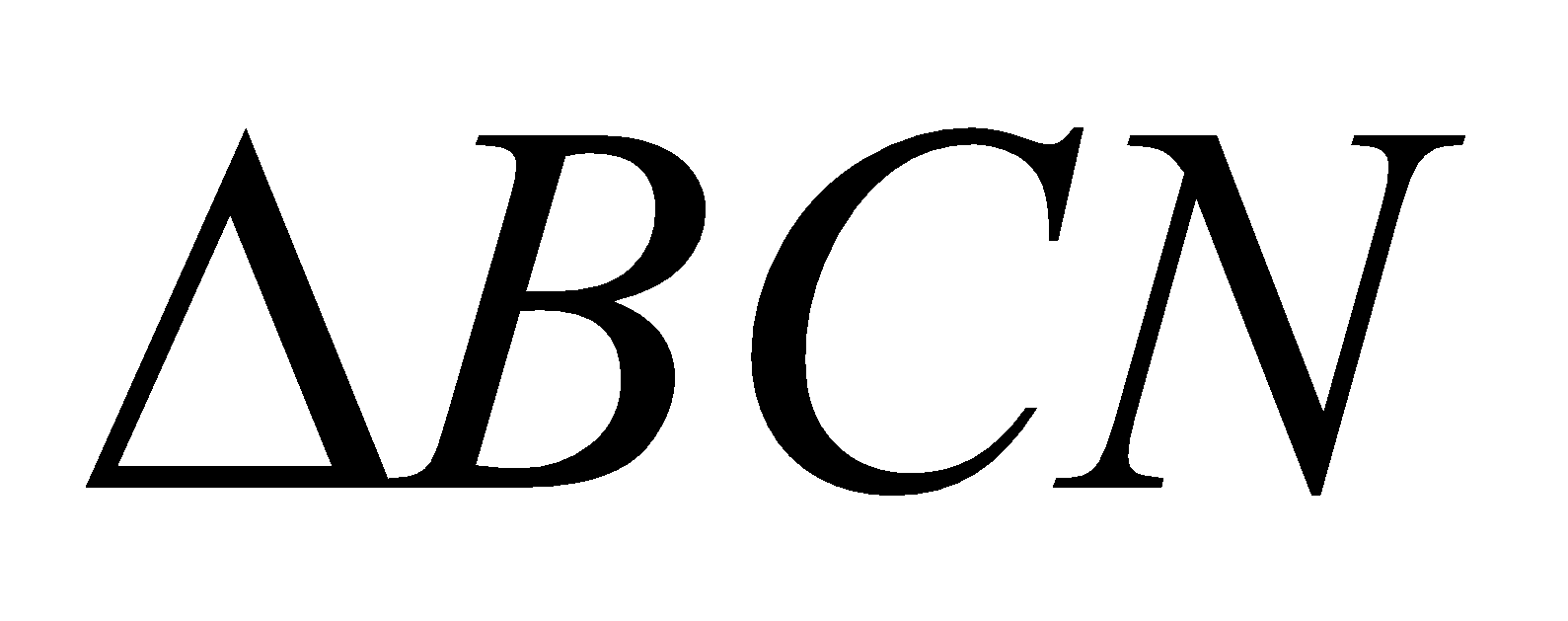
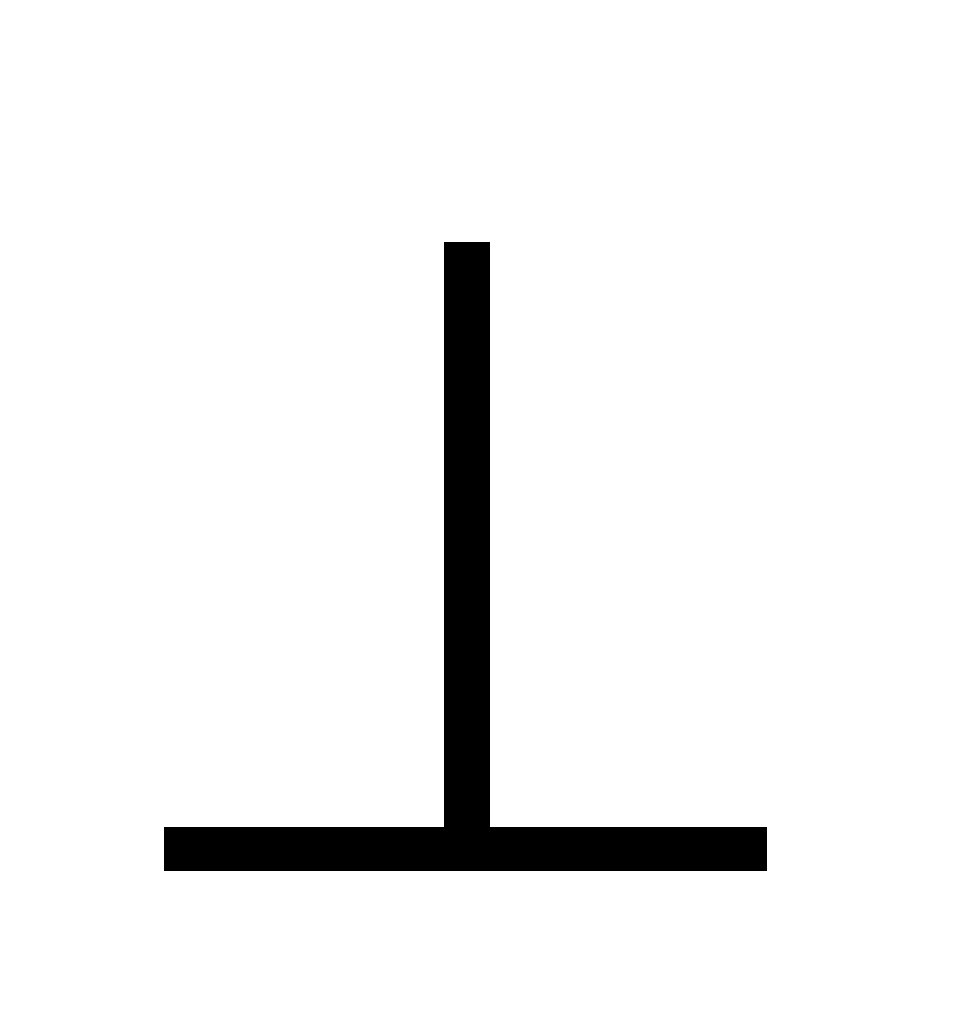
Gọi I là trung điểm của BM.

NI cắt BC tại E.

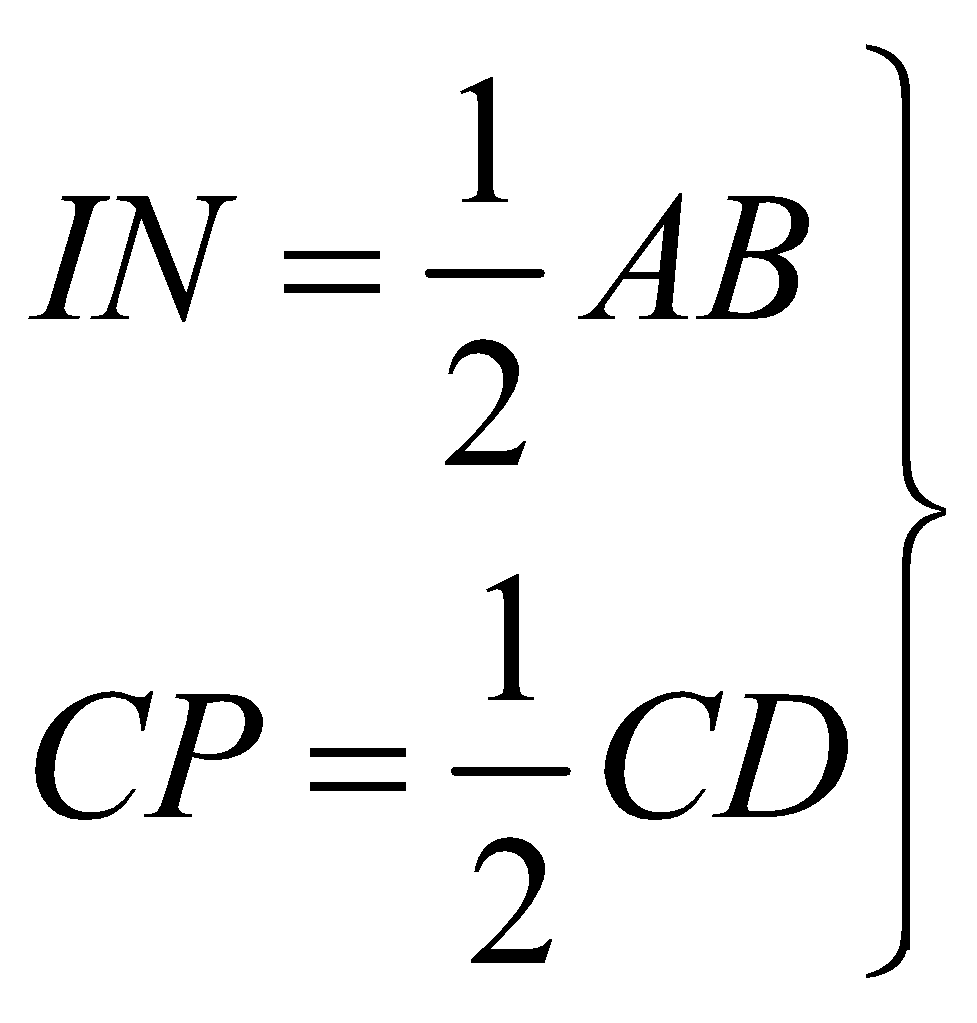
Ta có NI là đường trung bình của .

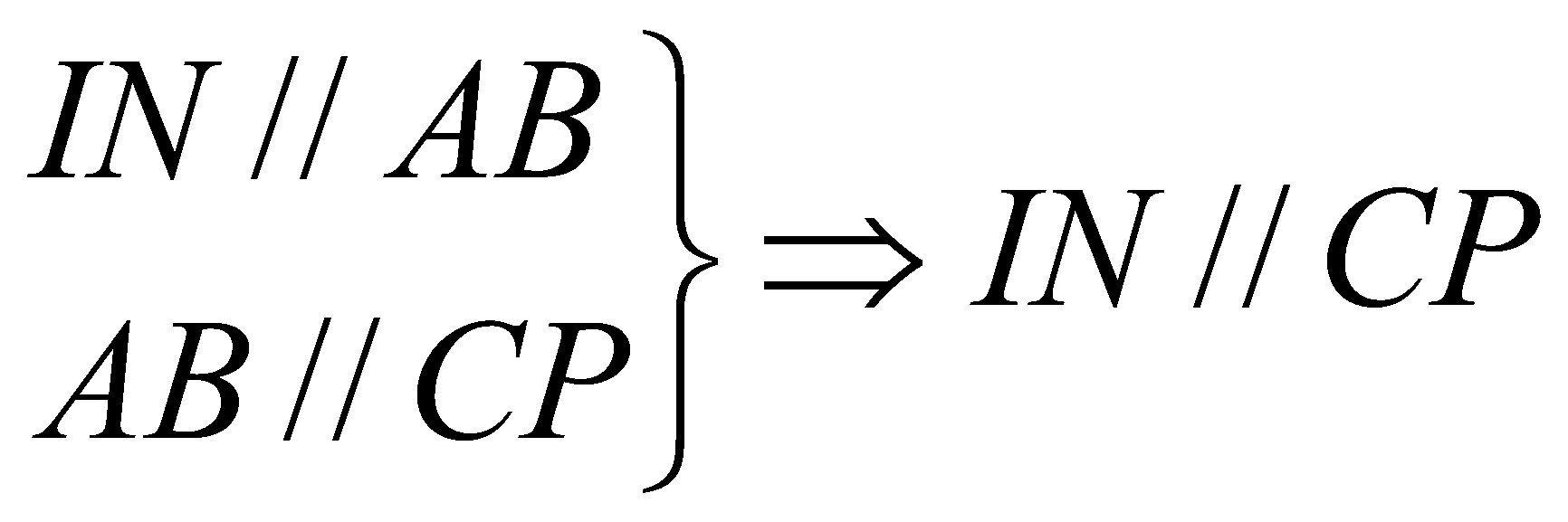
 NI // AB và NI = AB. 0.5 điểm

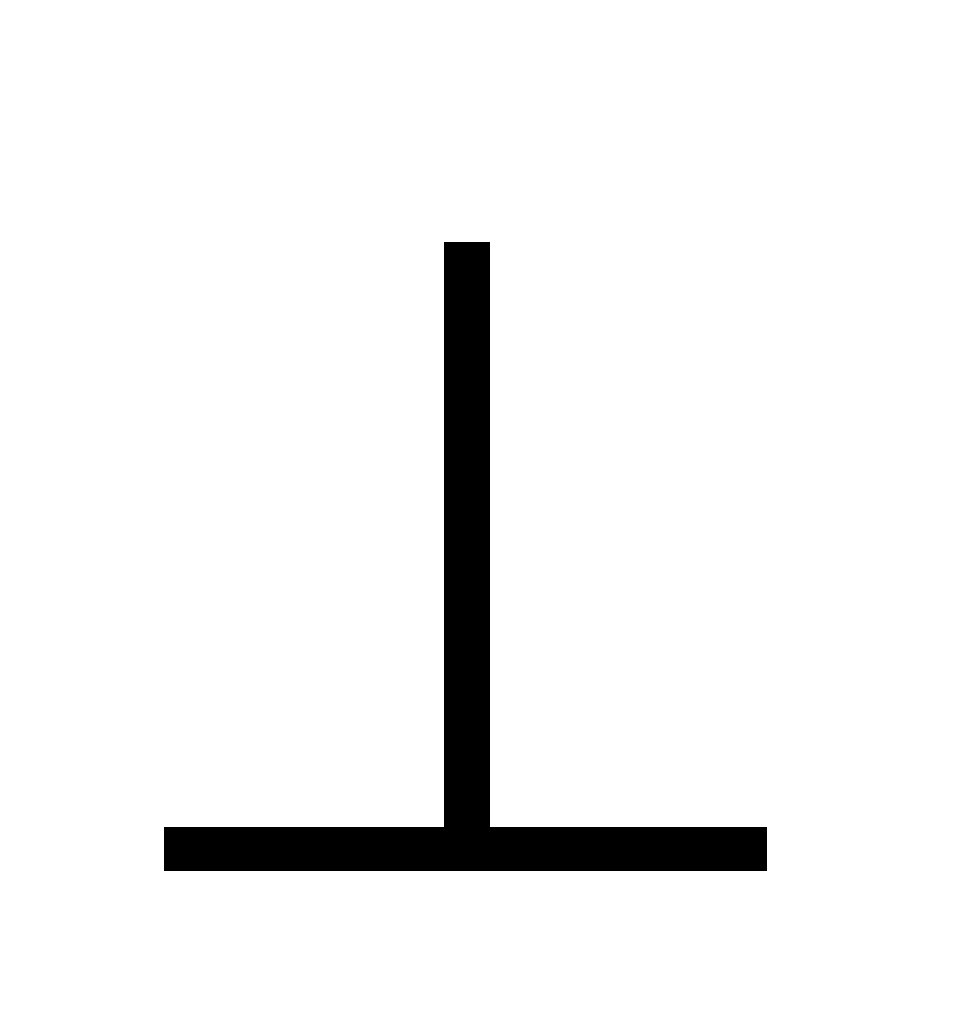
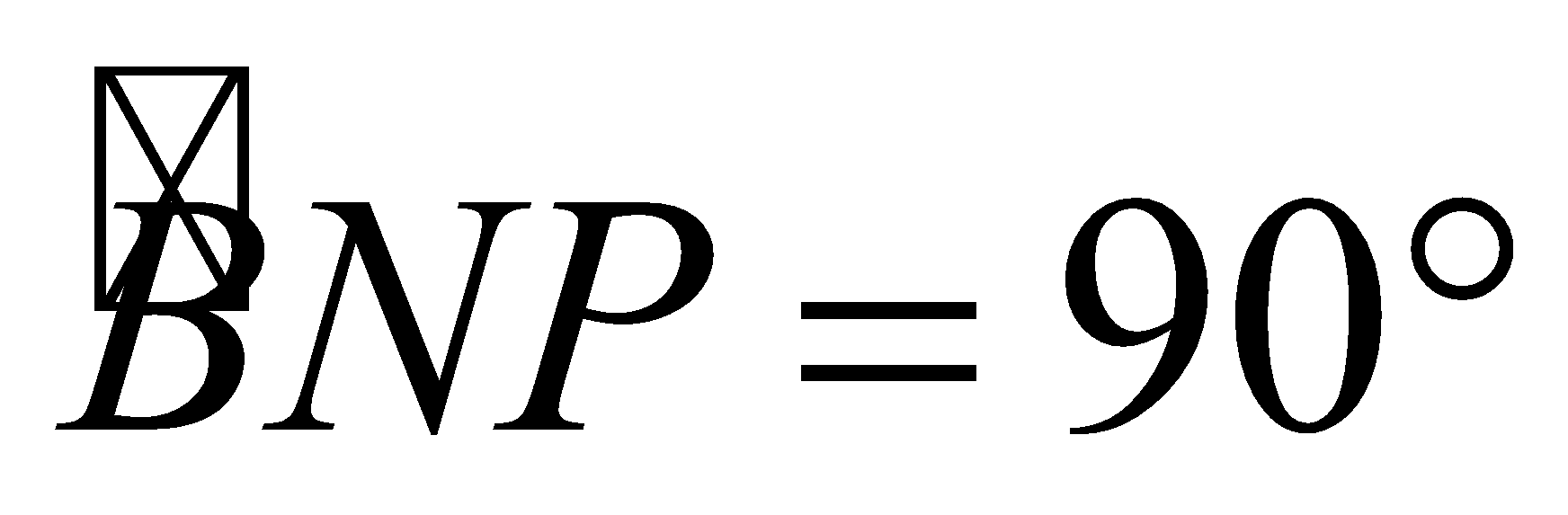
AB  BC  NI  BC tại E 0.5 điểm

 I là trực tâm của  CIBN (1) 0.5 điểm

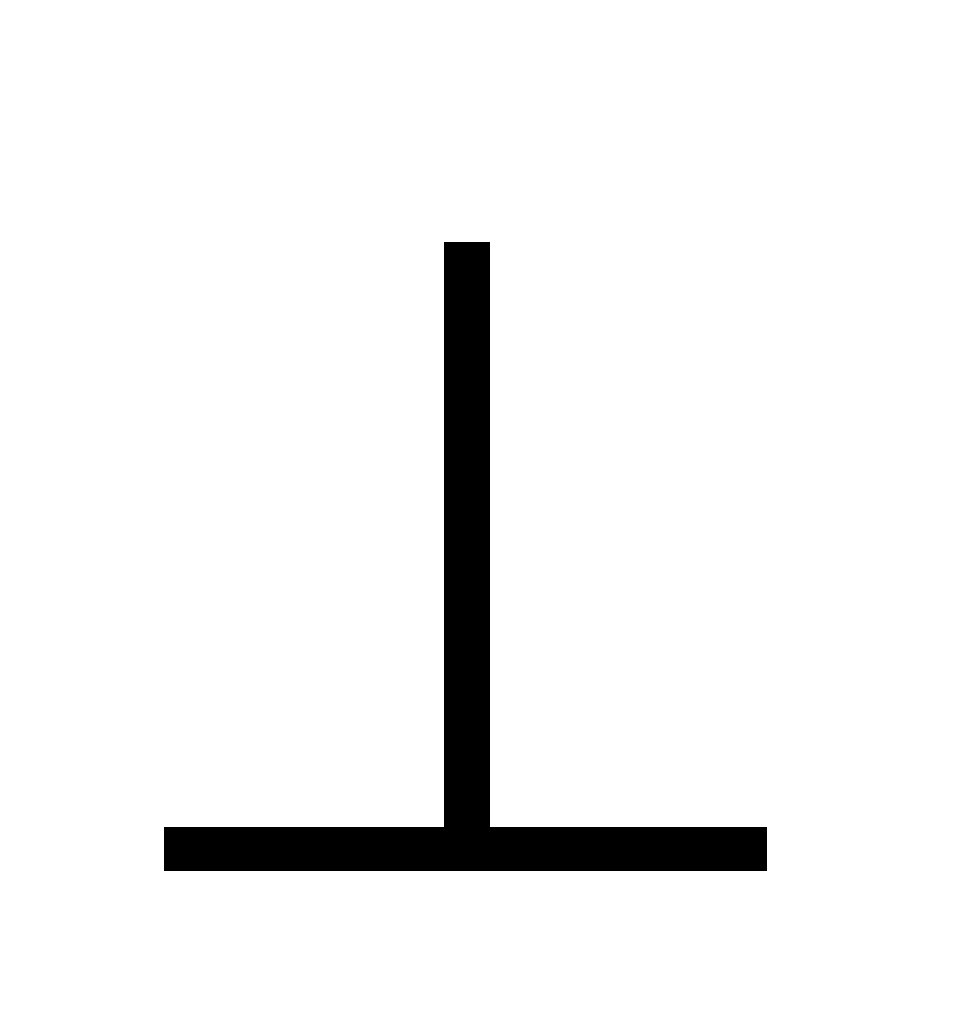
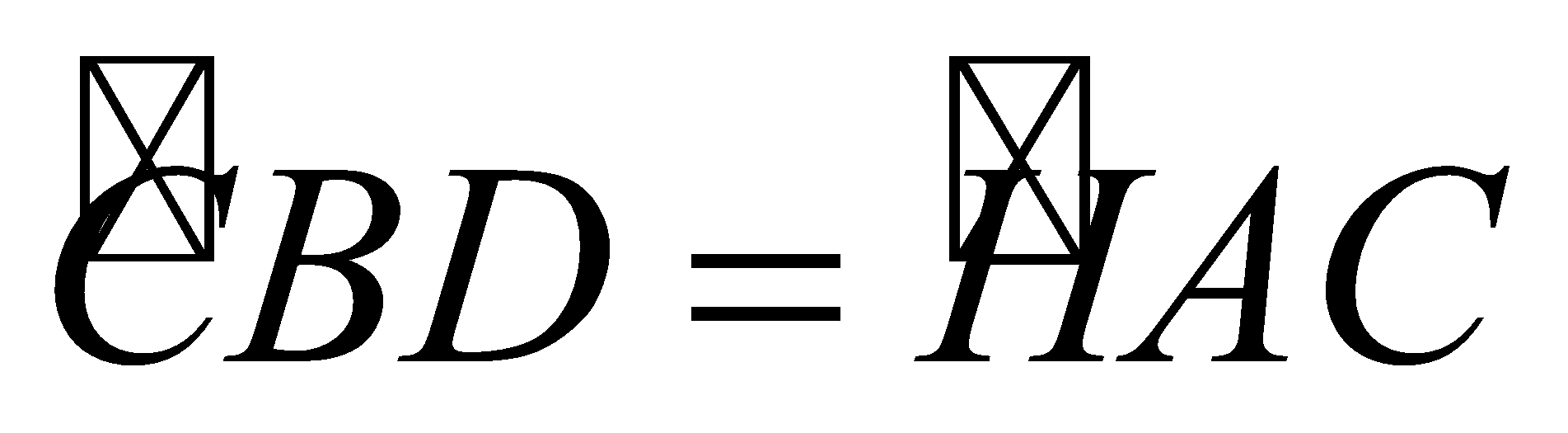
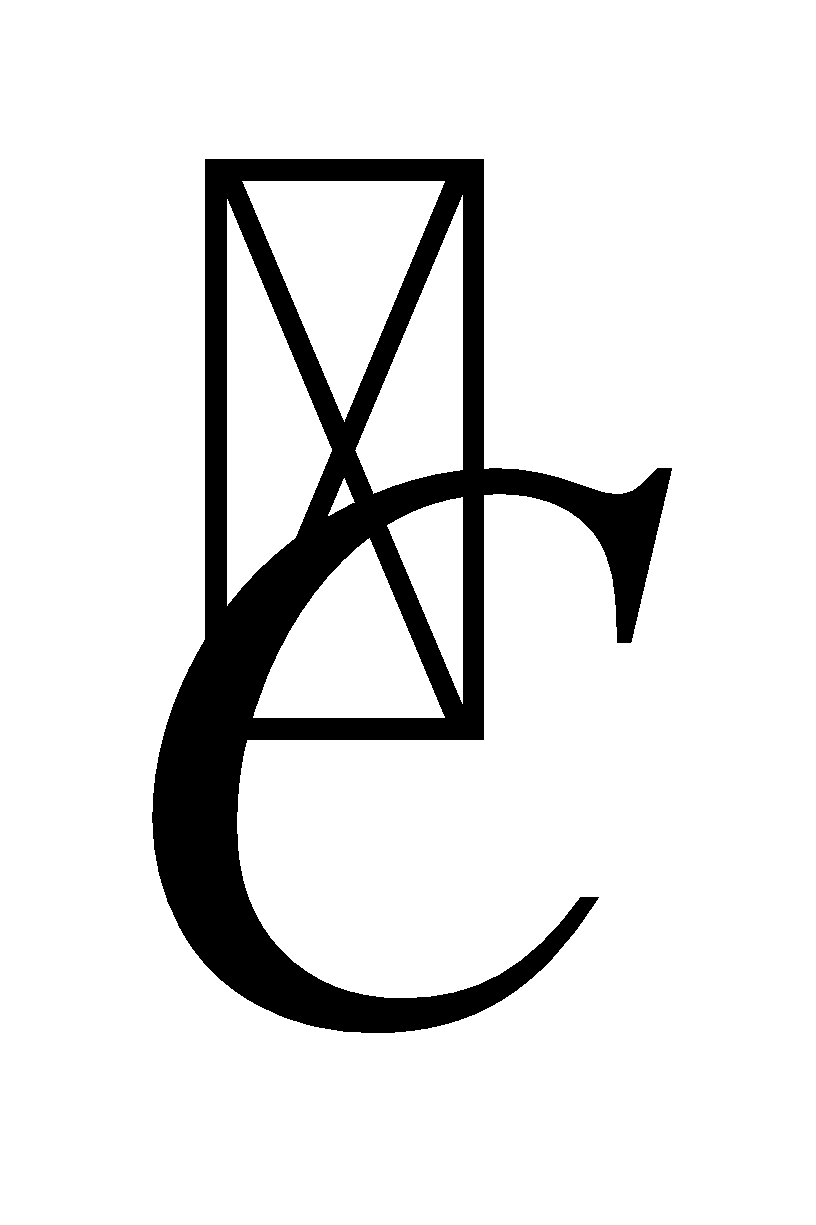
Ta có:

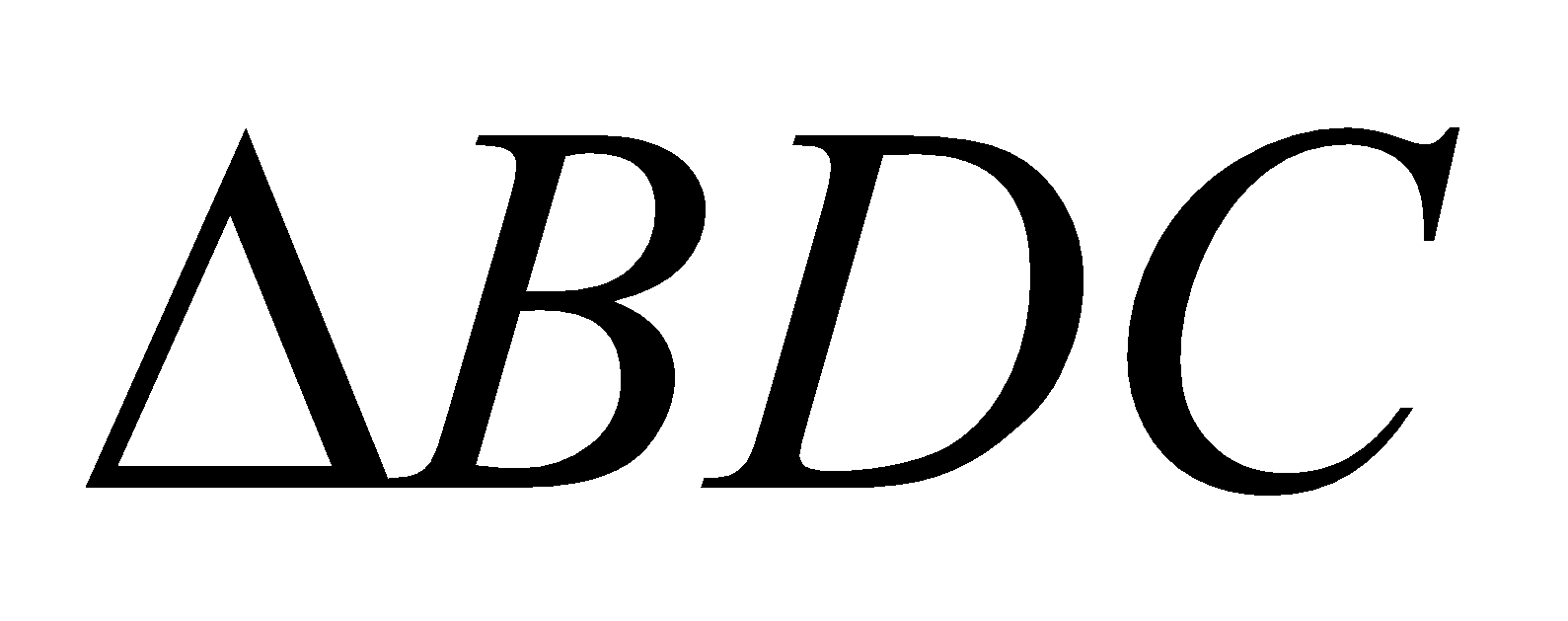
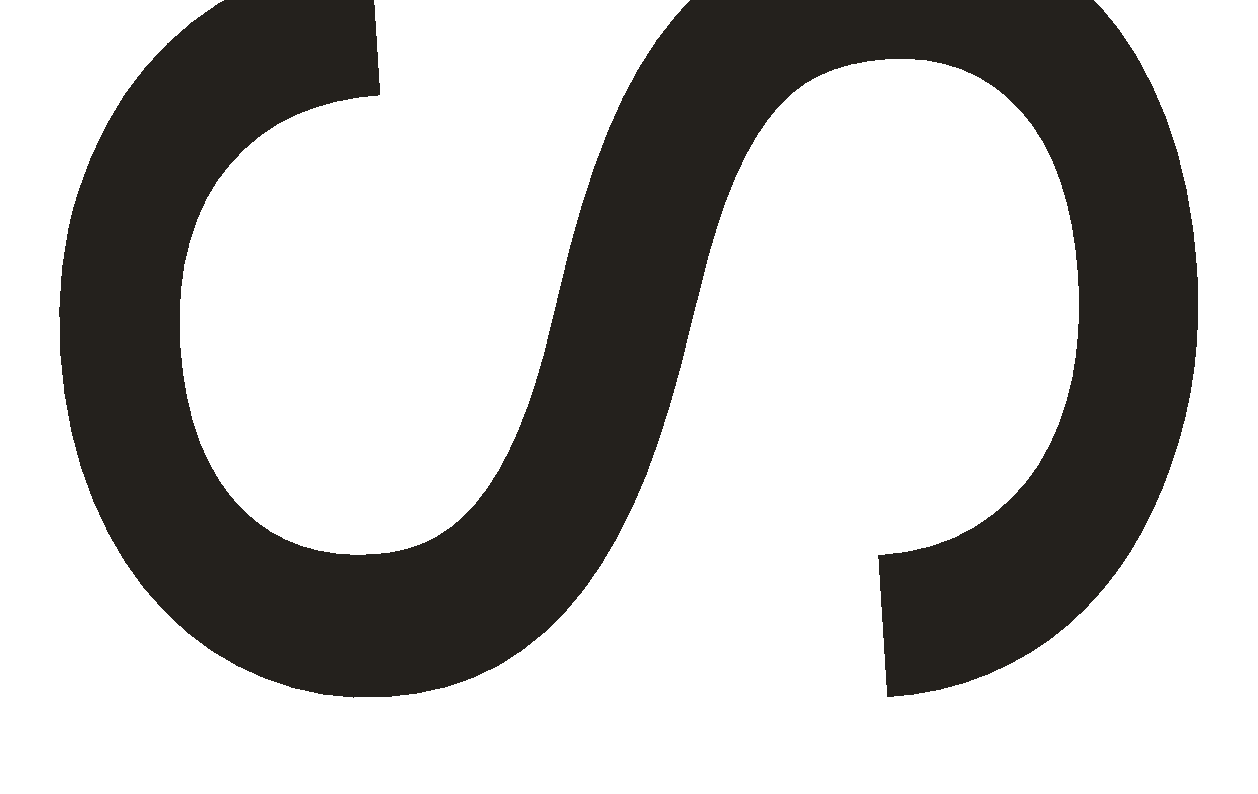
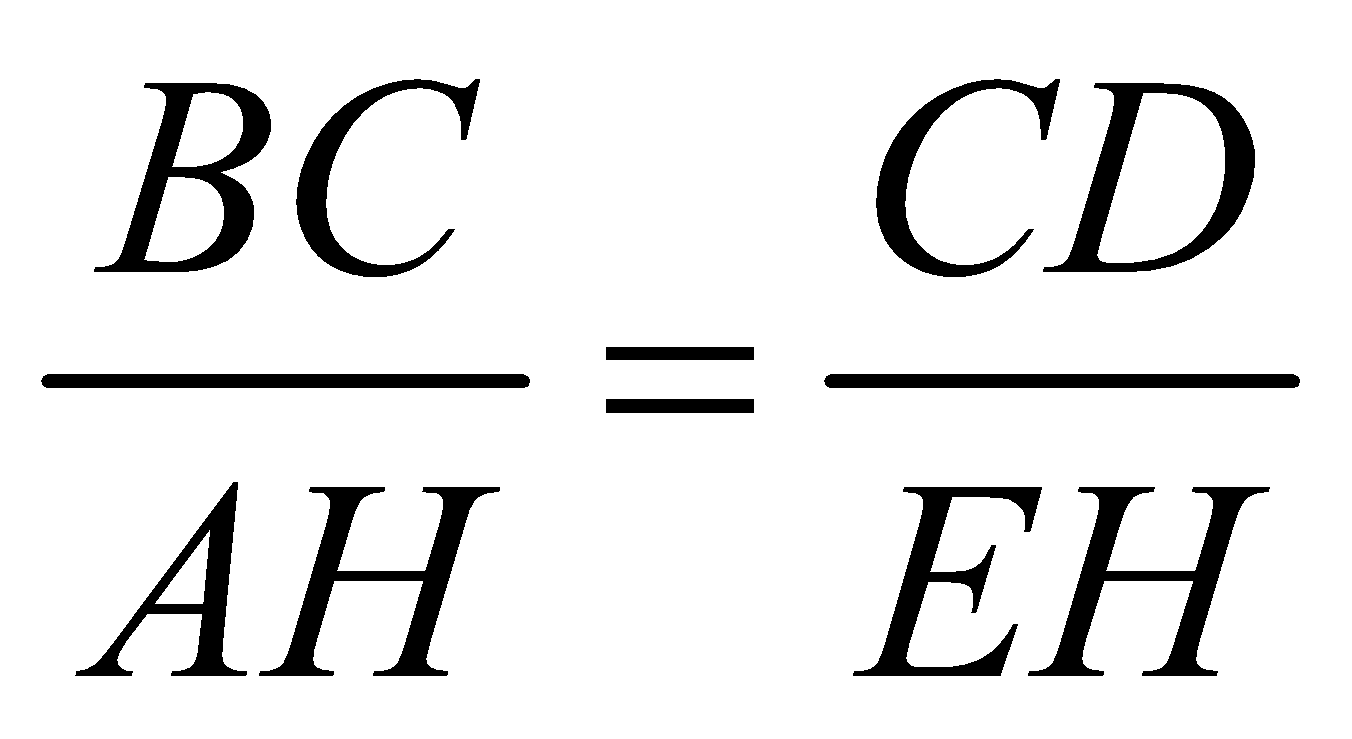
 mà AB = CD  IN = CP  CINM là hình bình hành CI // NP (2) 0.5 điểm

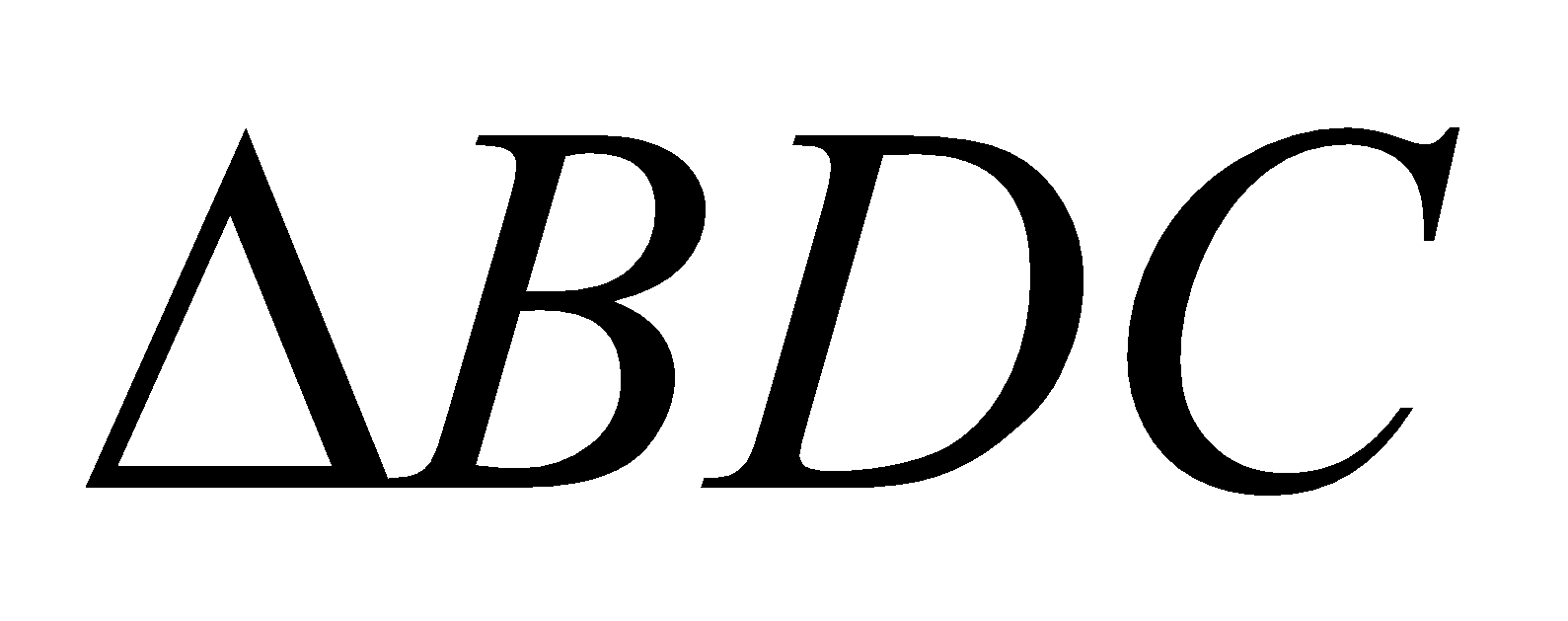
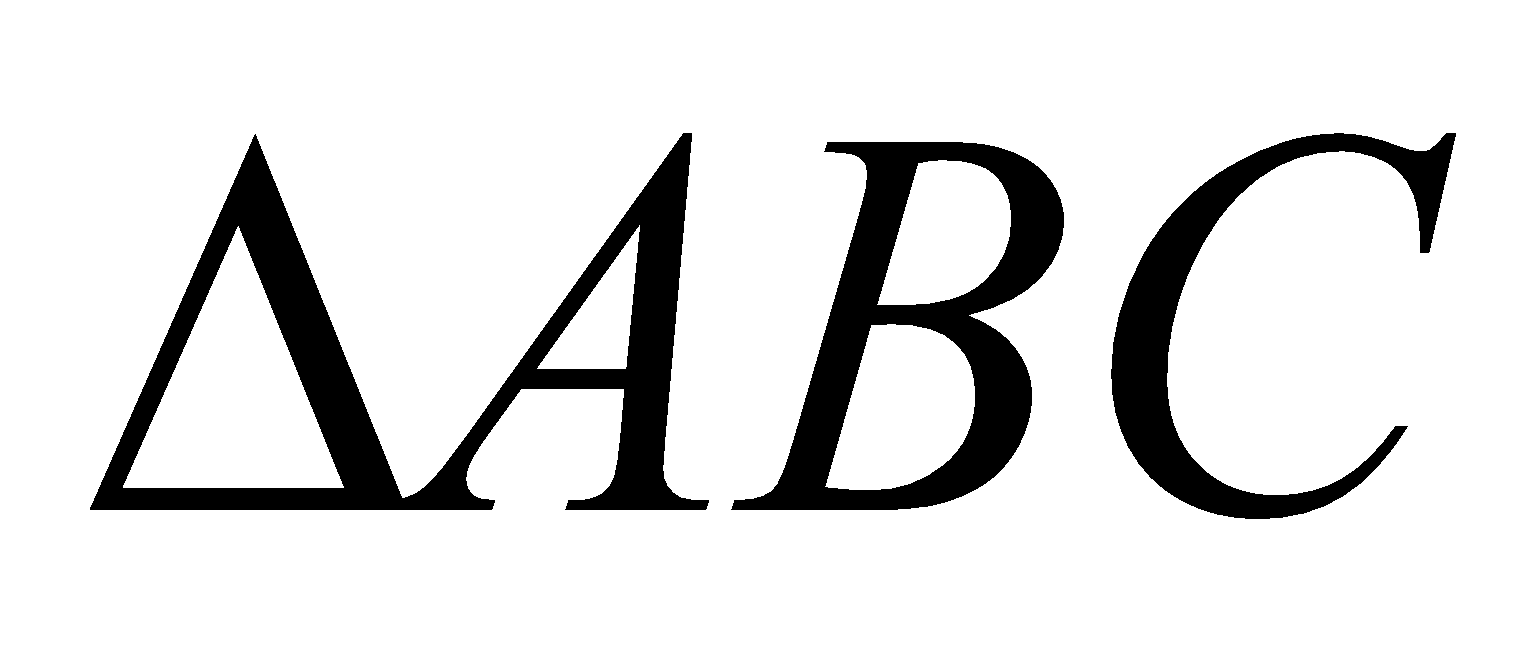
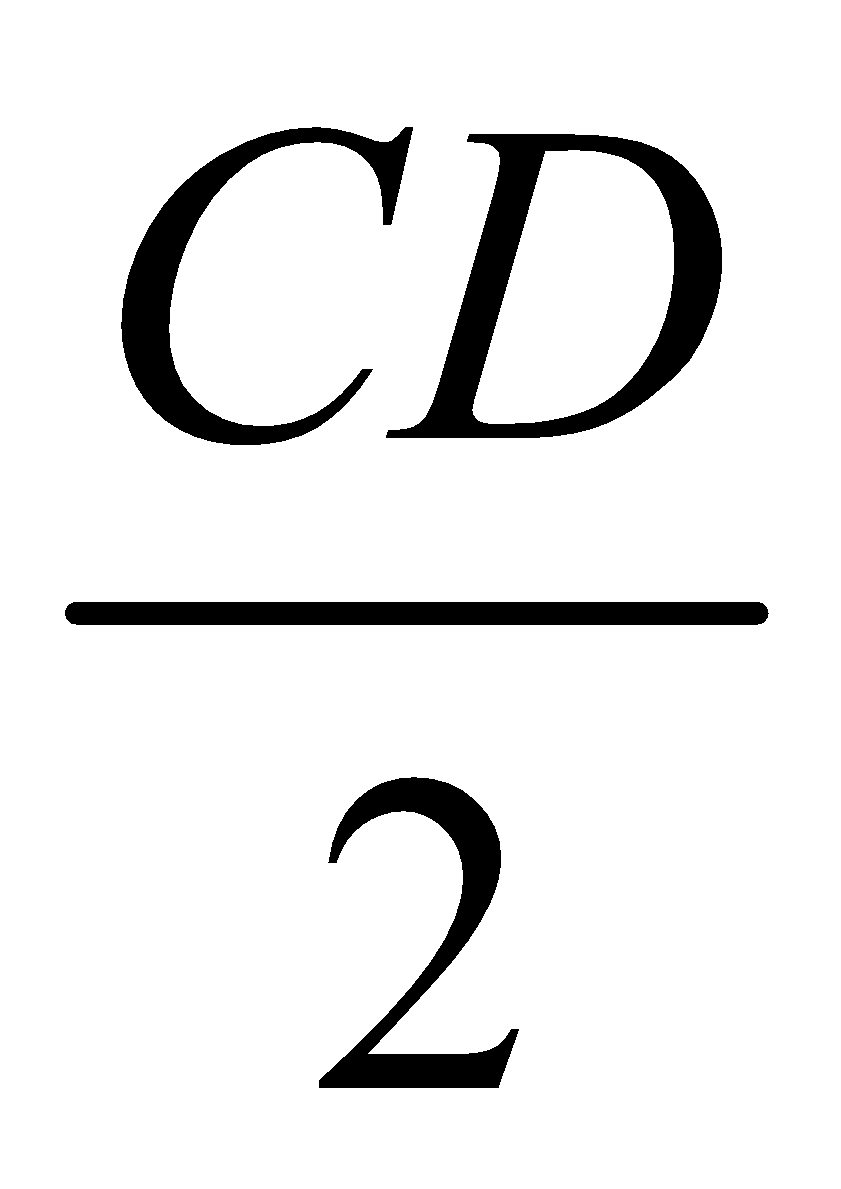
 0.5 điểm

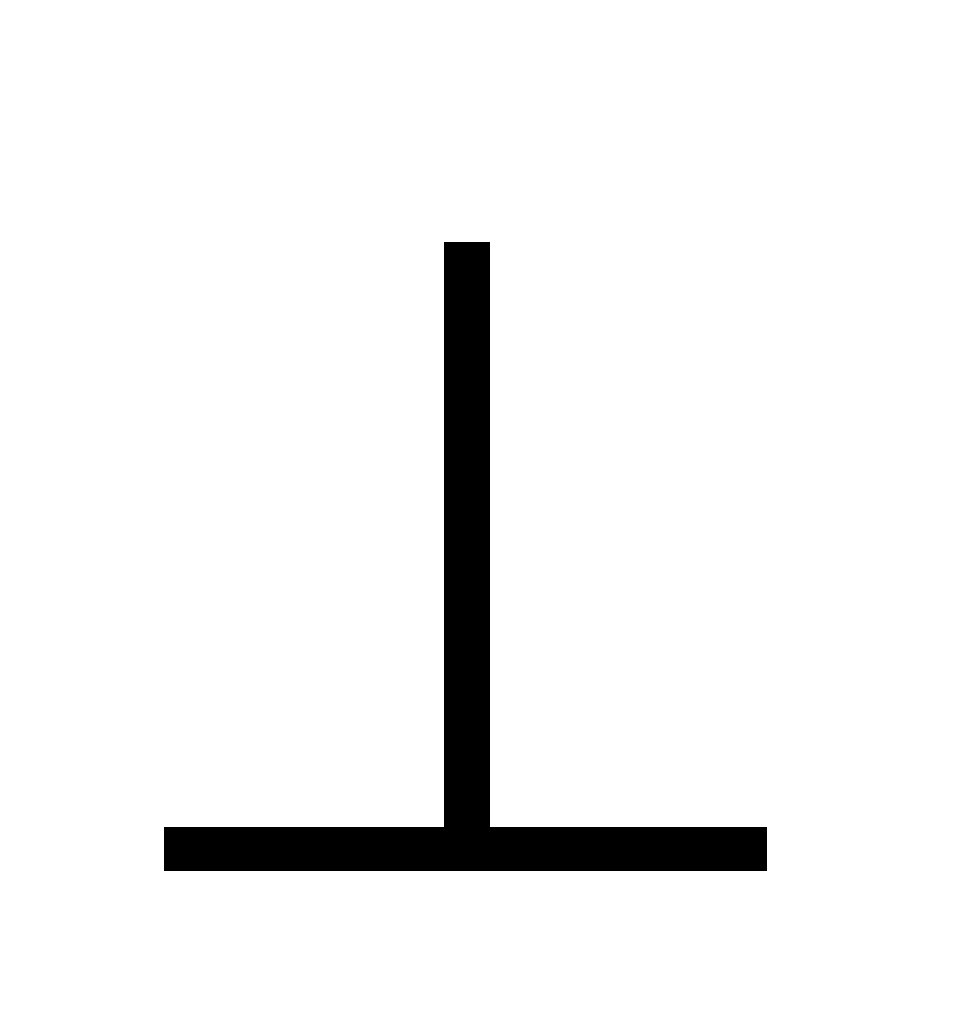
Từ (1) và (2)  NP  BN tại N   0.5 điểm

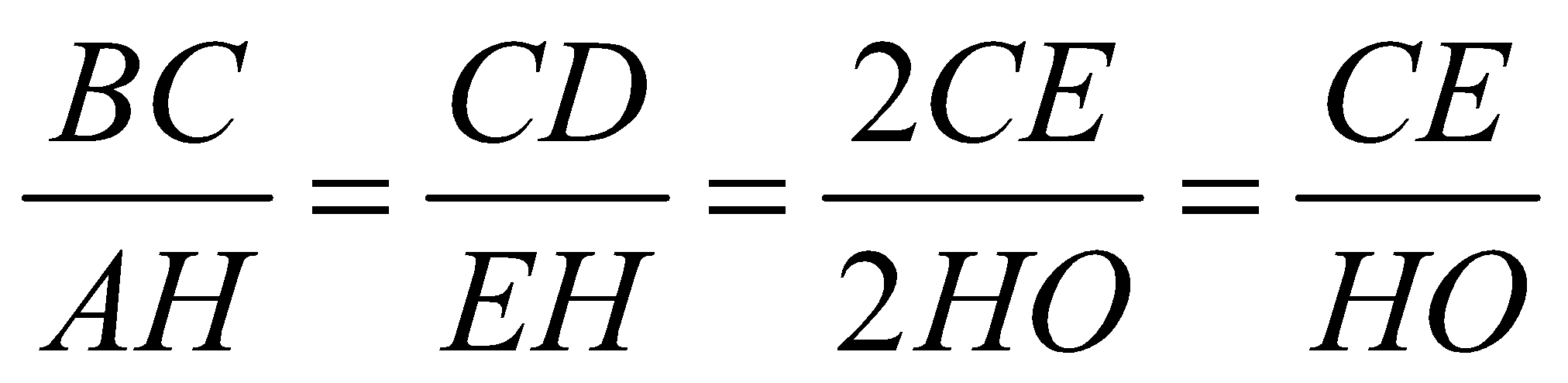
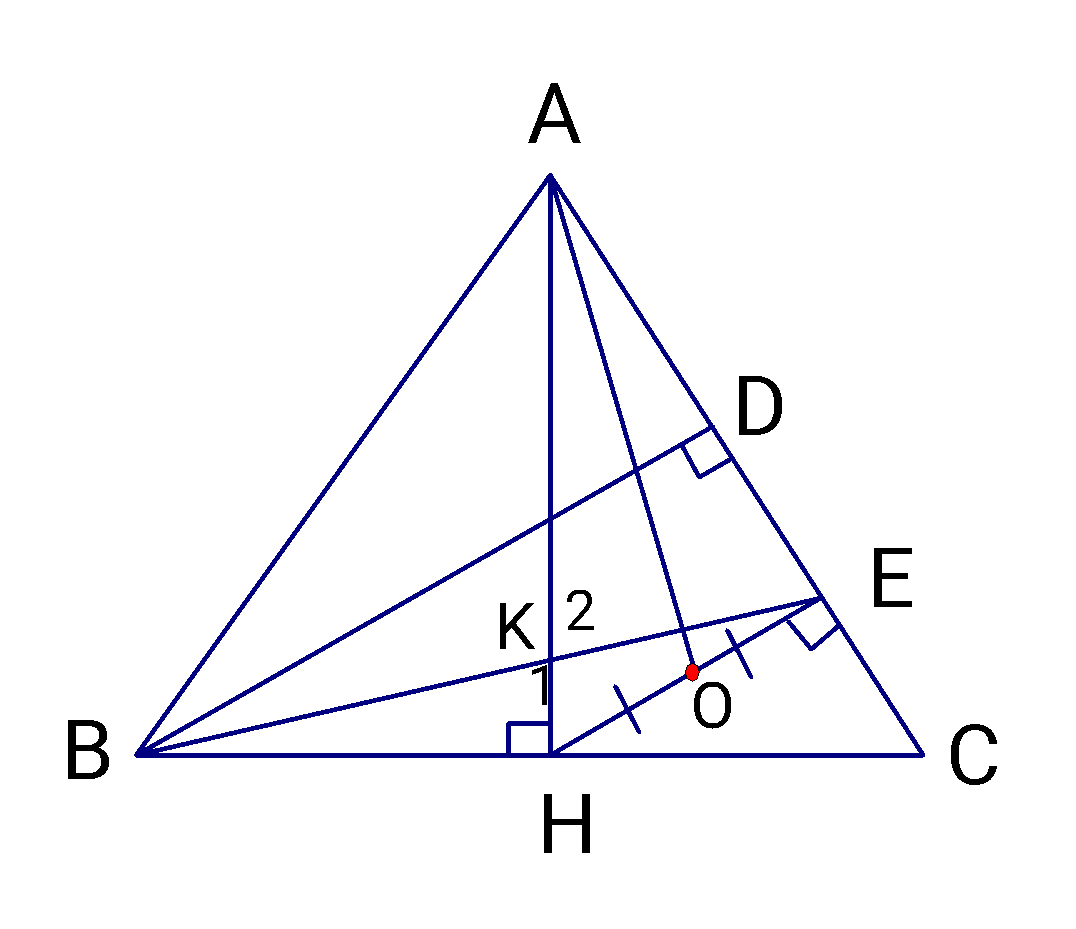
**Bài 6:**

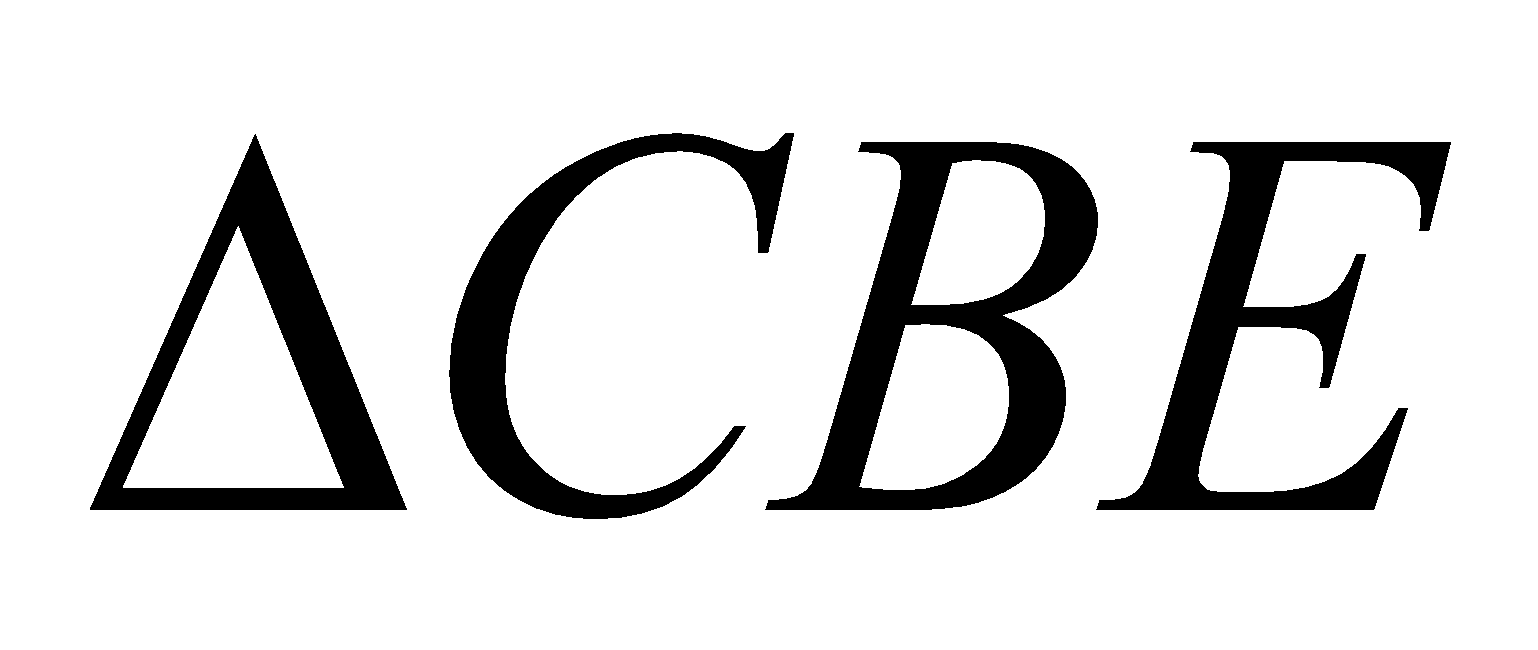
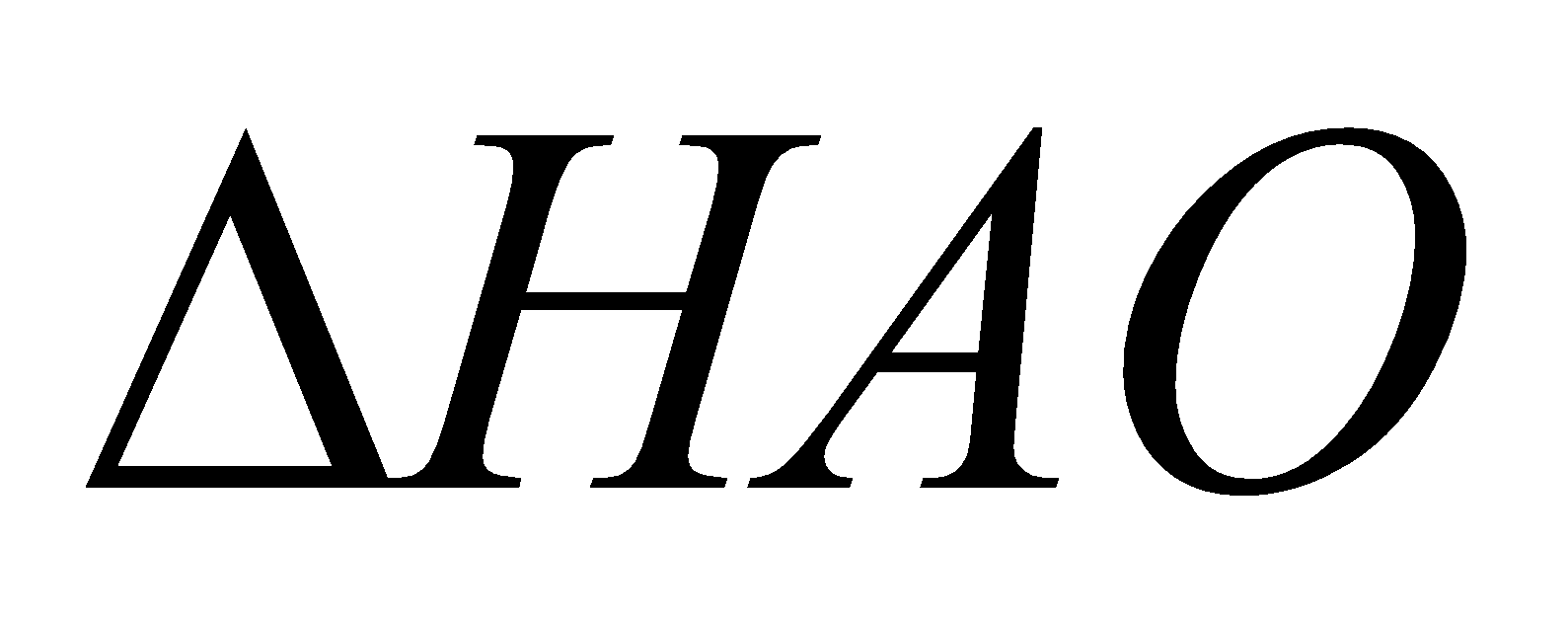
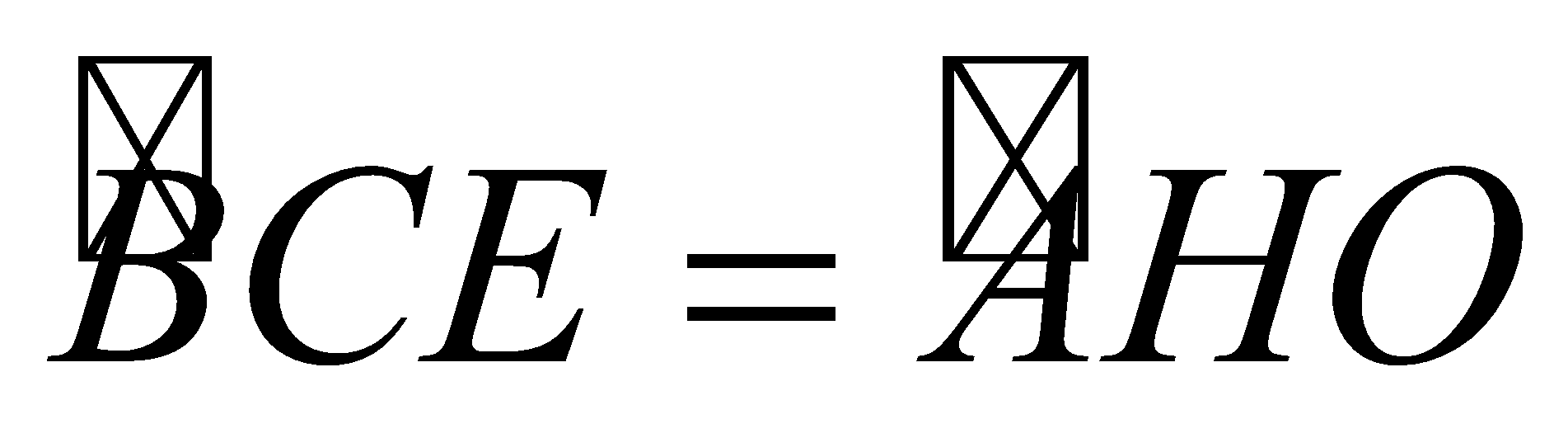
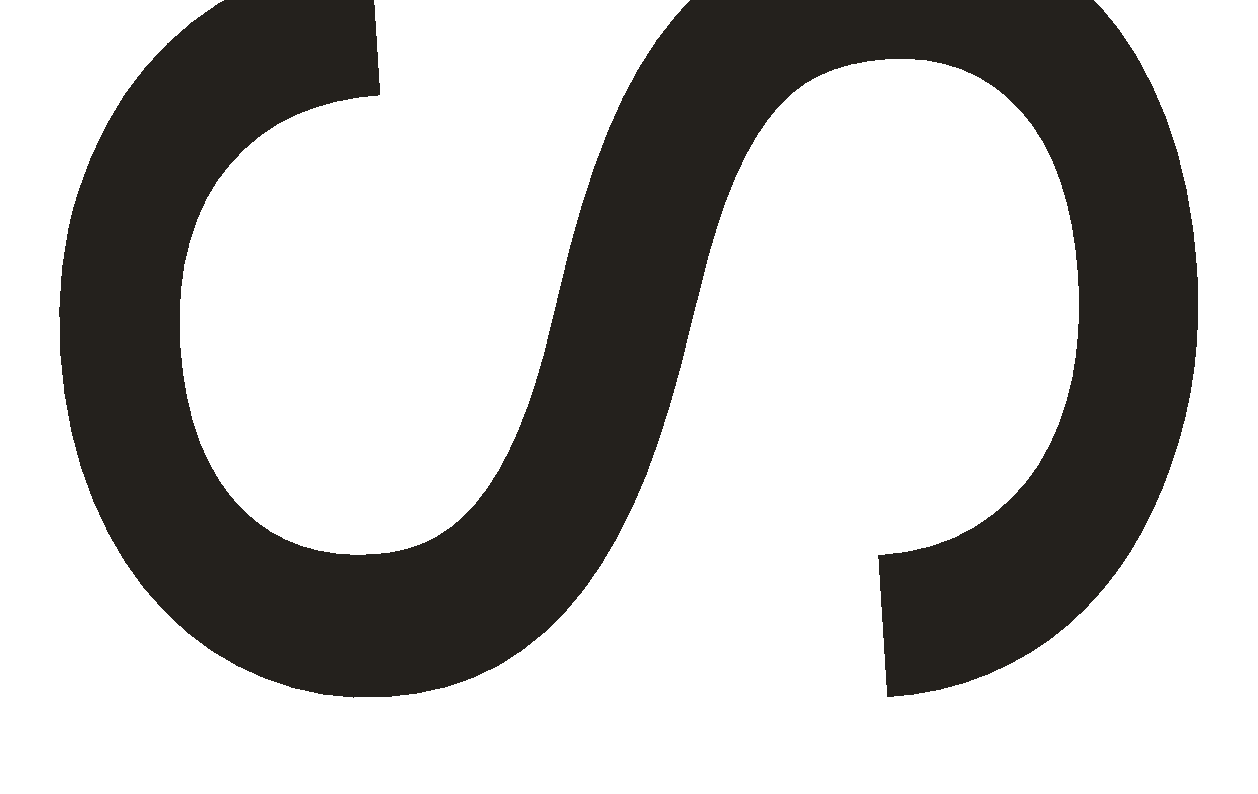
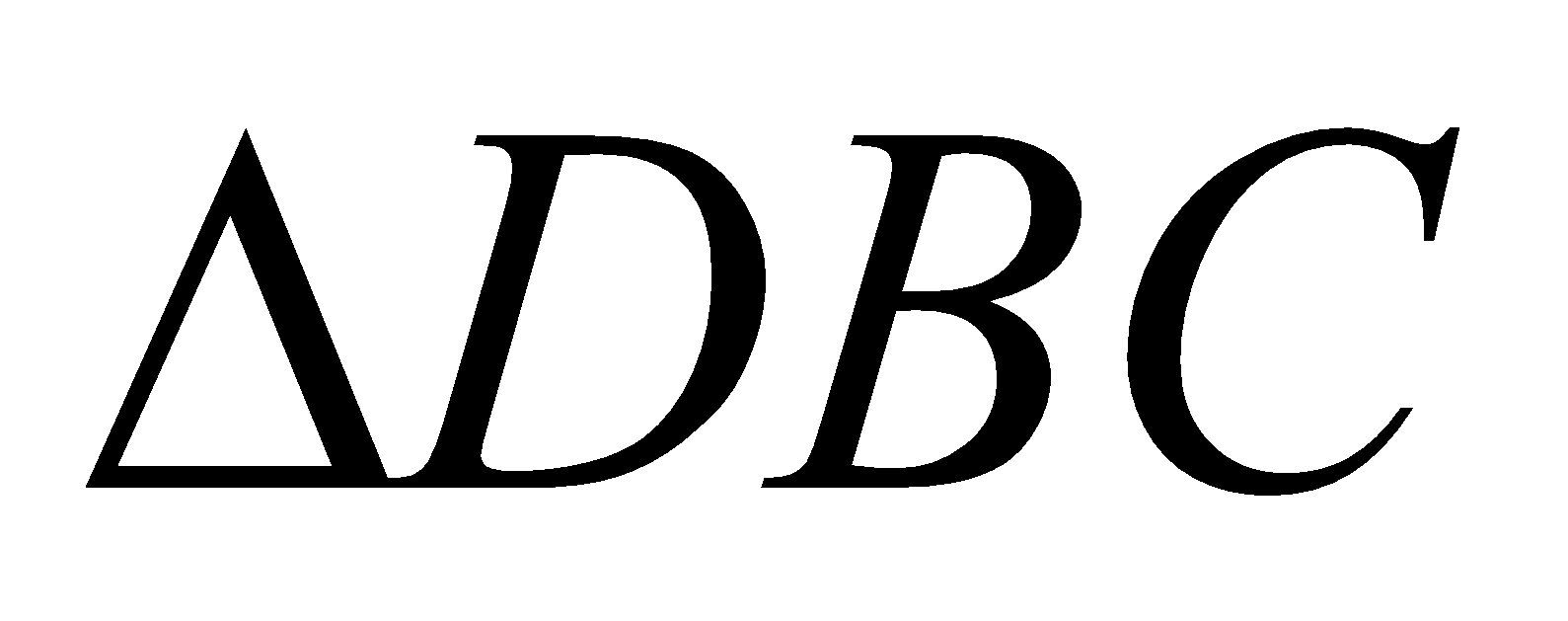
Kẻ BD  AC   ( cùng phụ với )

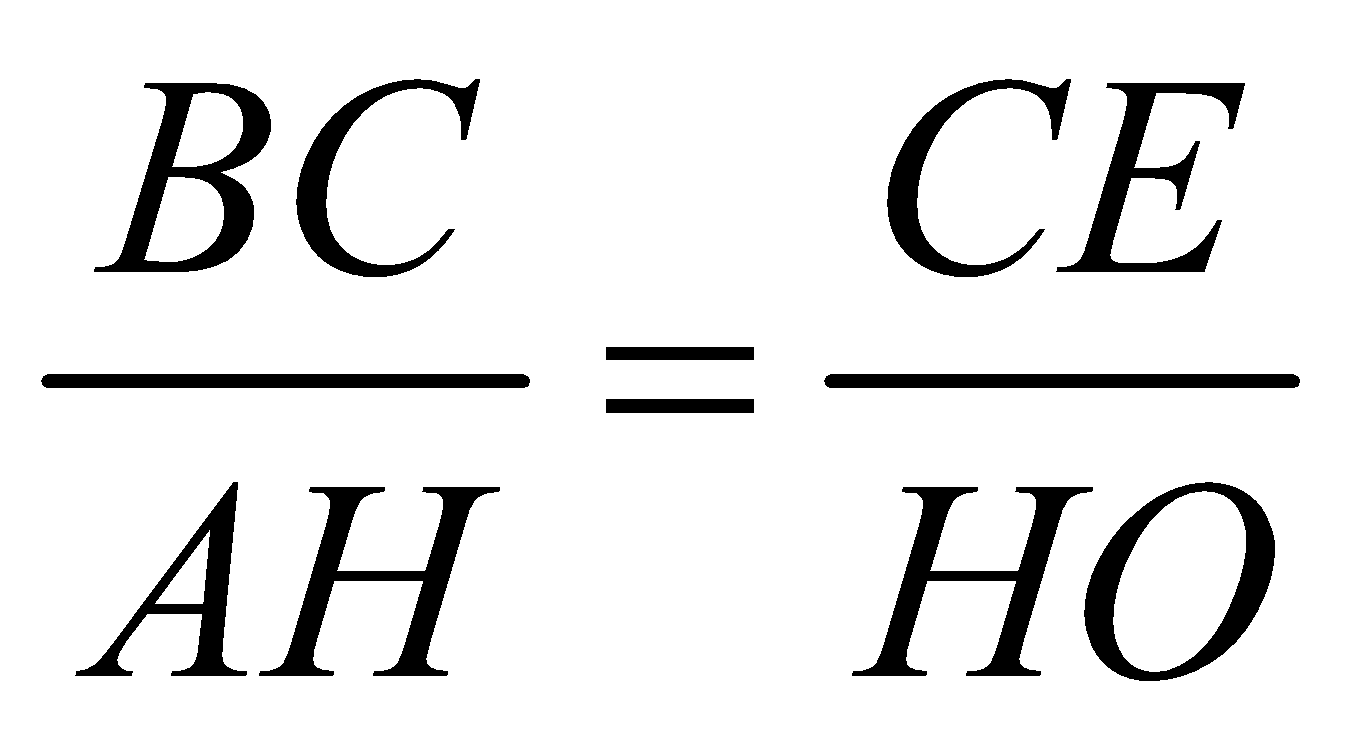
   (gg)   0.5 điểm

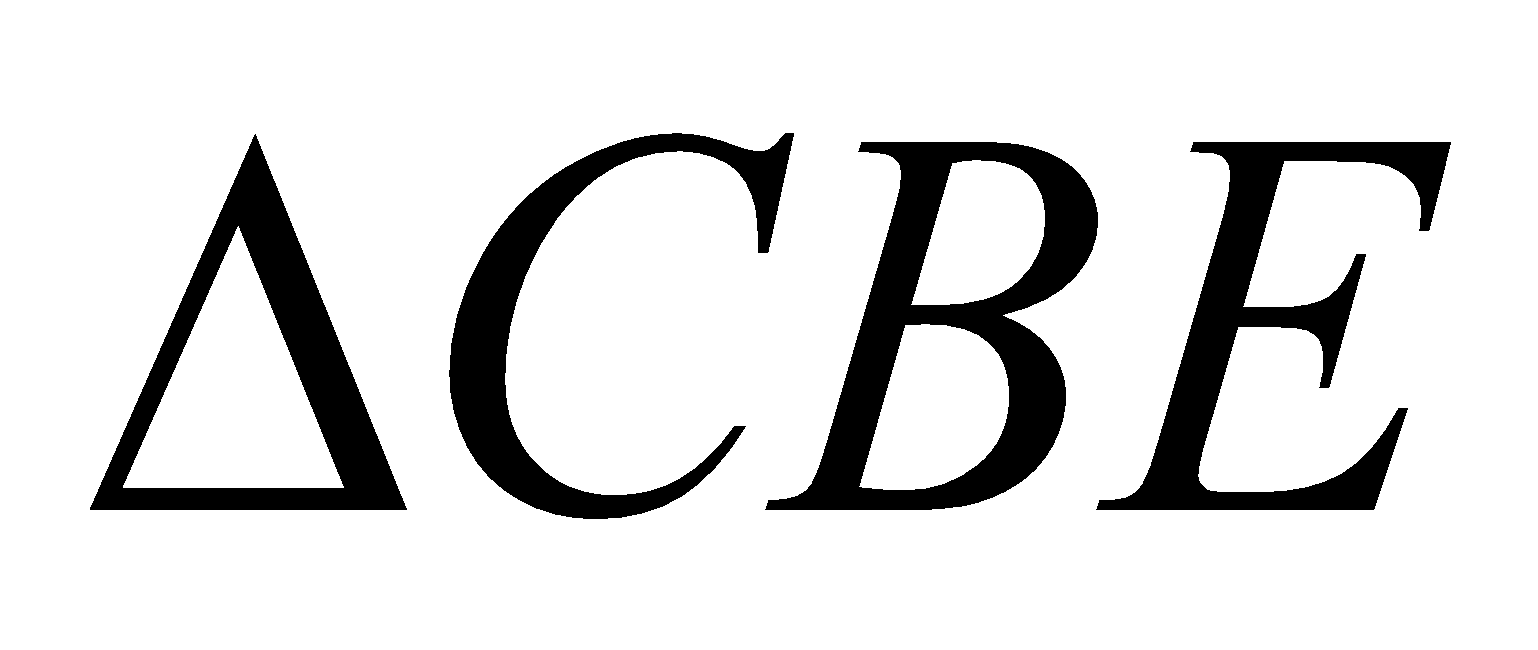
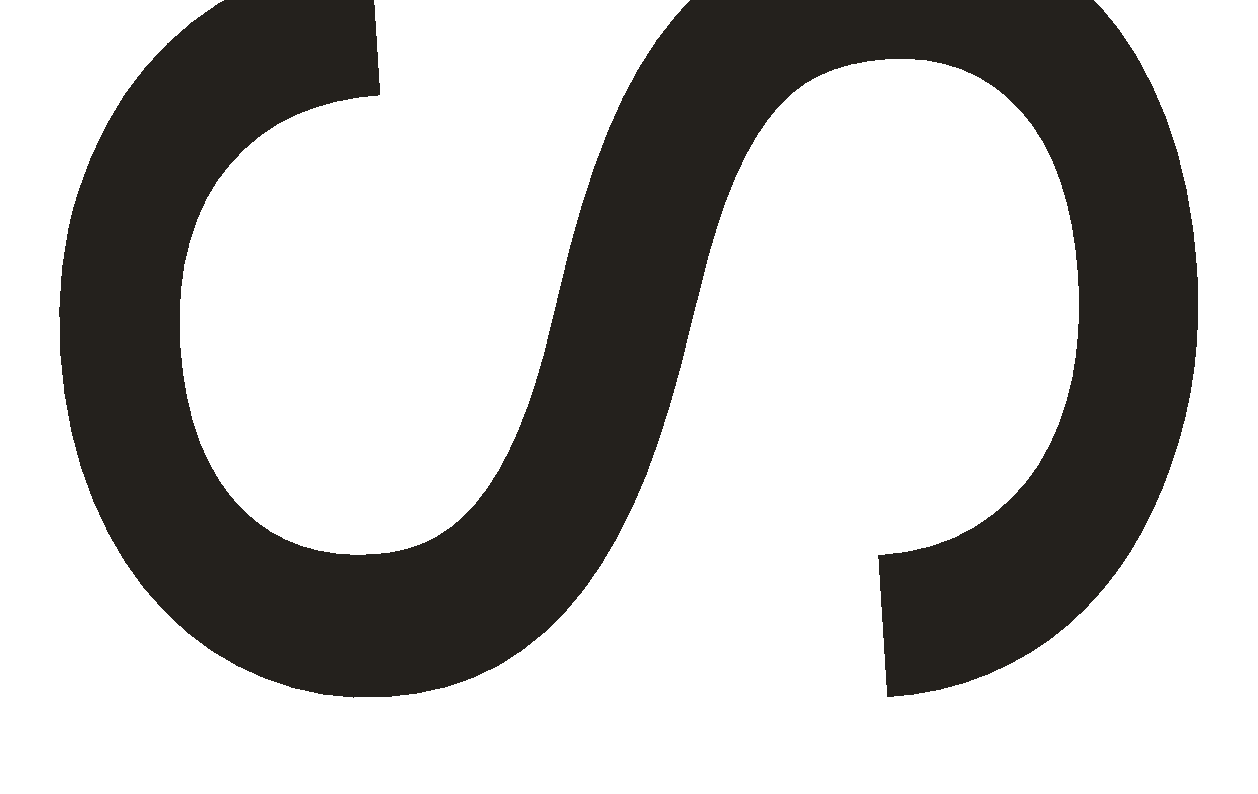
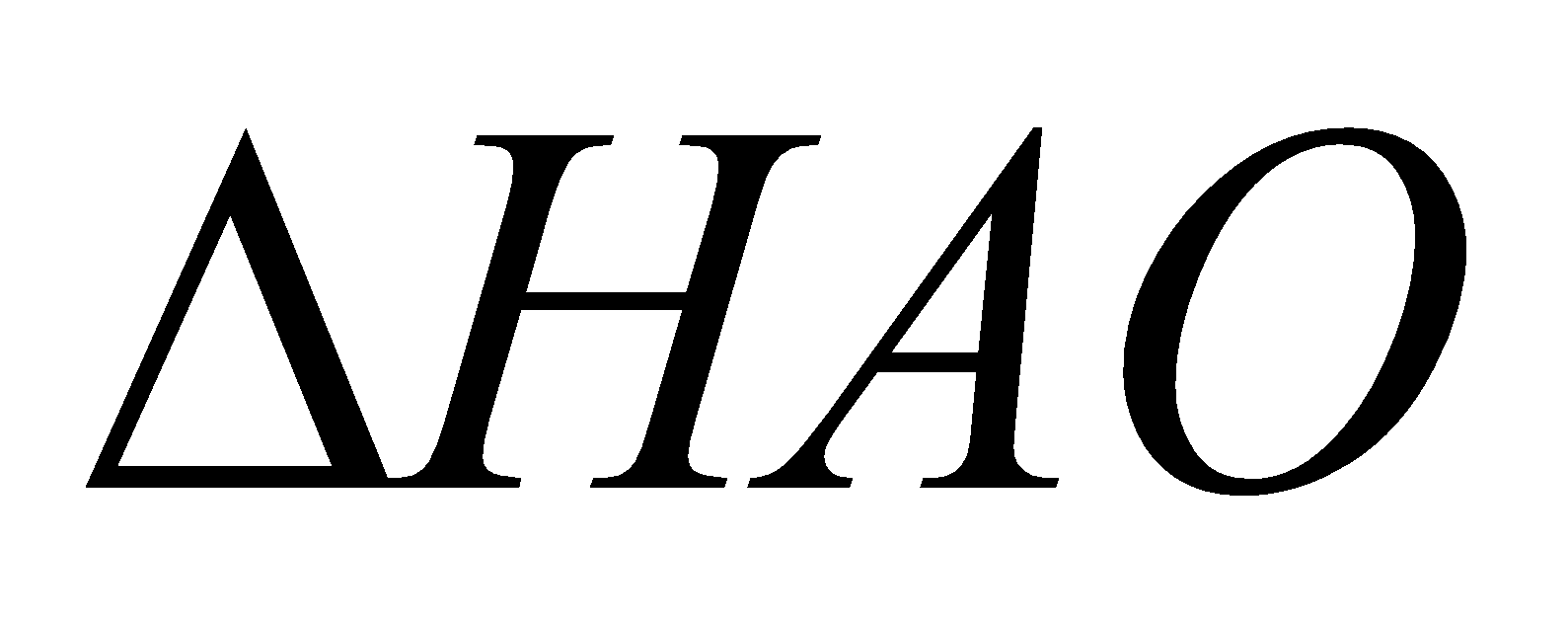
 có BH = HC (  cân tại A)  DE = EC =  0.5 điểm

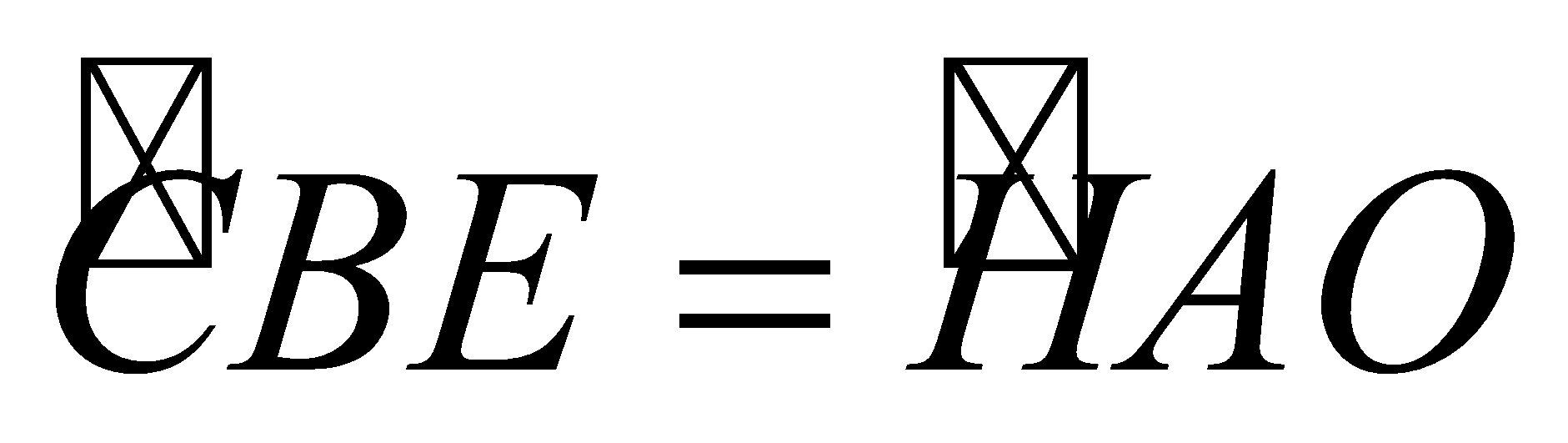
HE // BD (cùng  AC)

 0.5 điểm

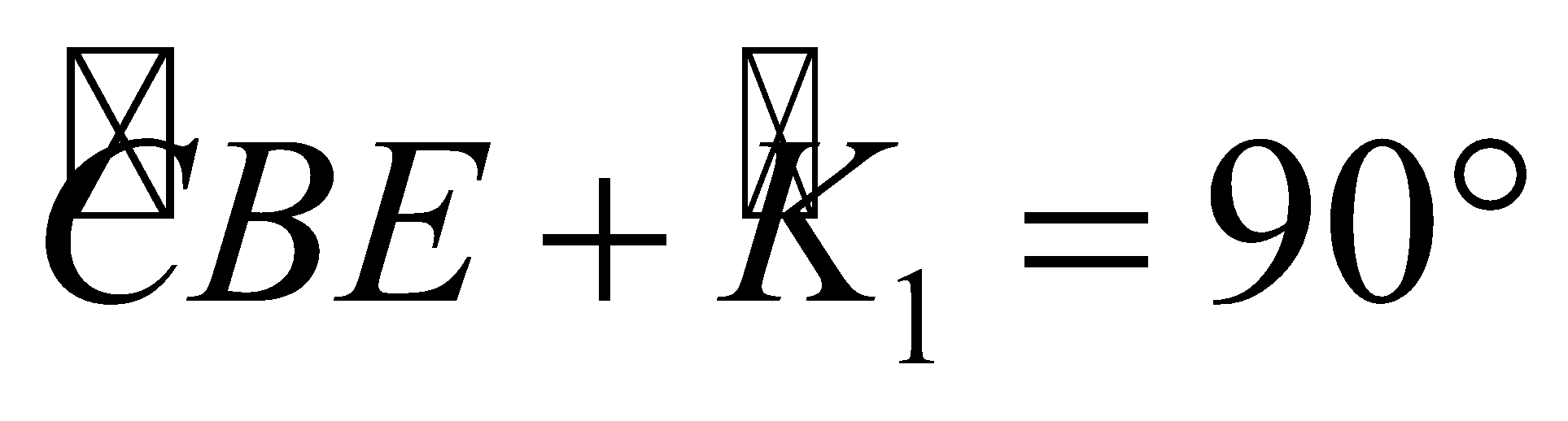
 và  có  (  )

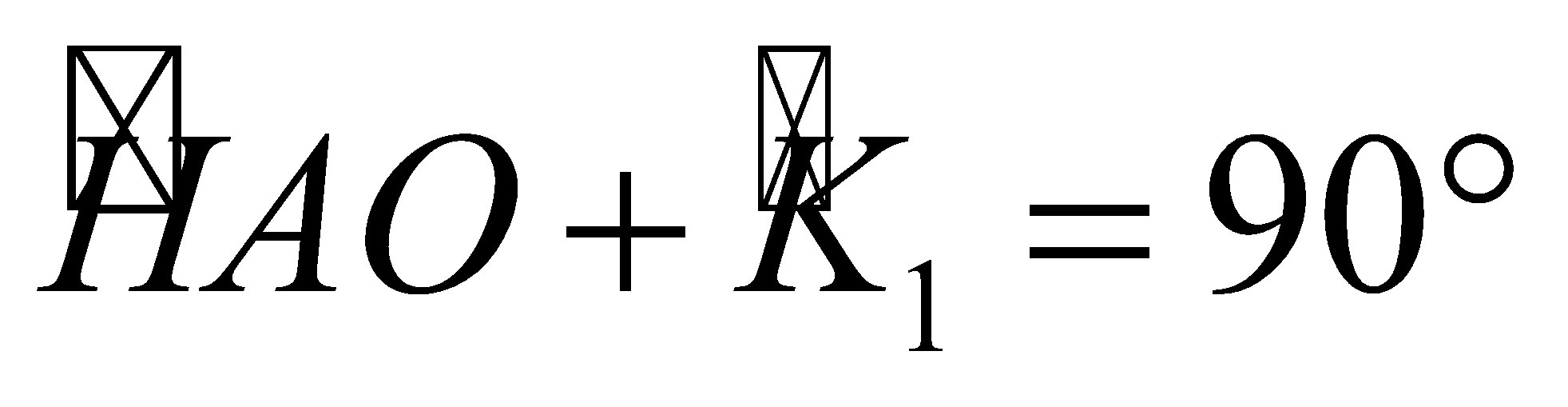
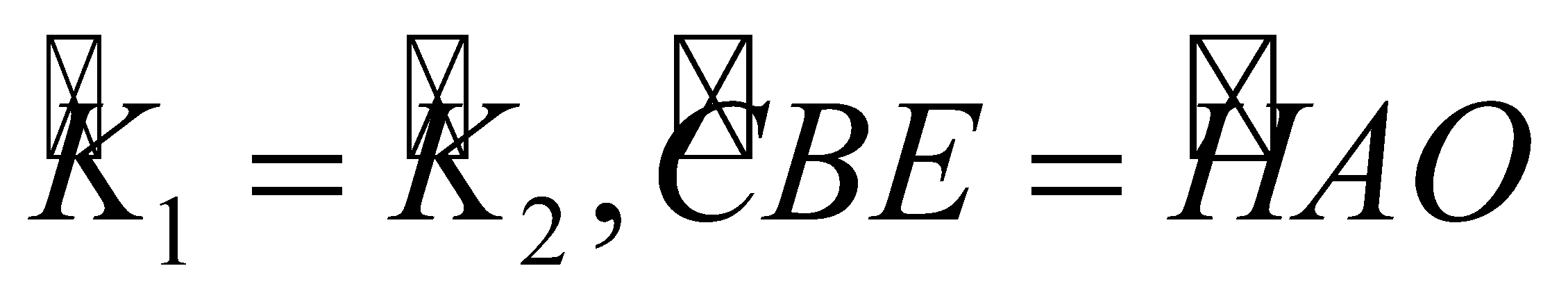


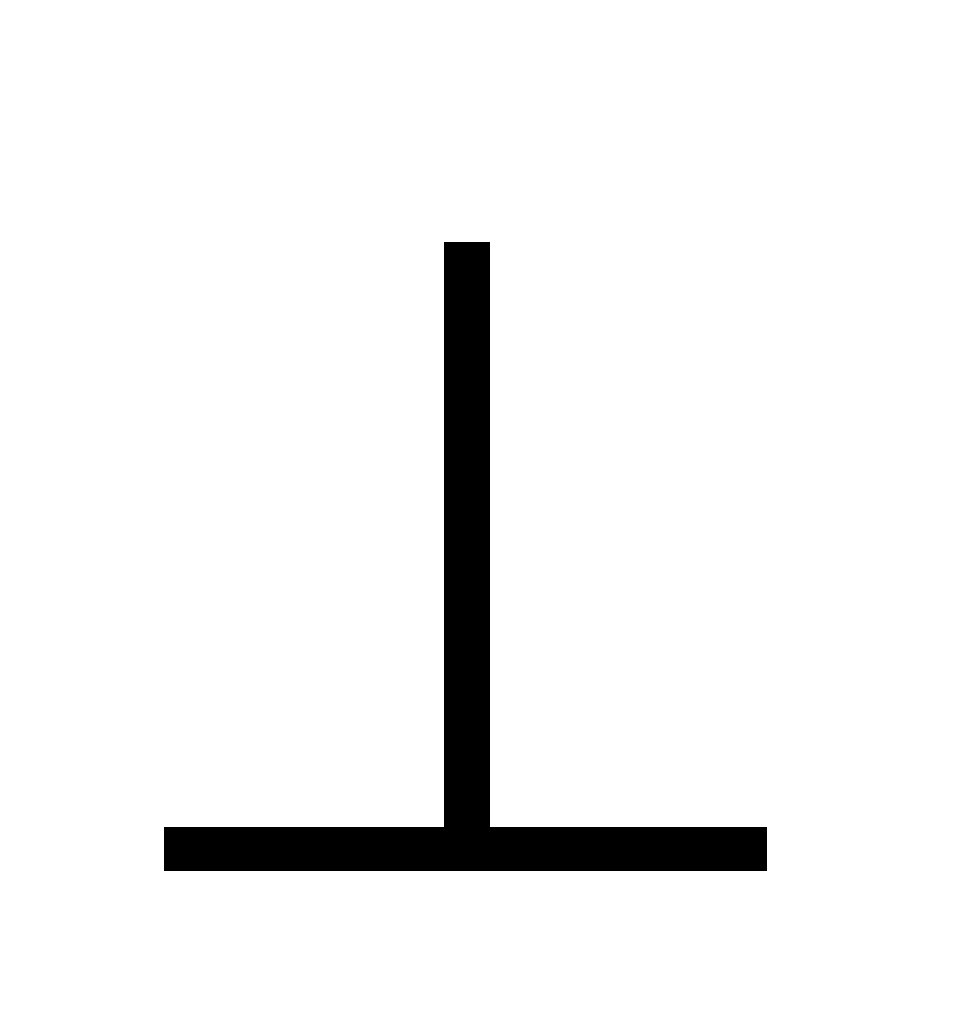
    (c.g.c)

  0.5 điểm

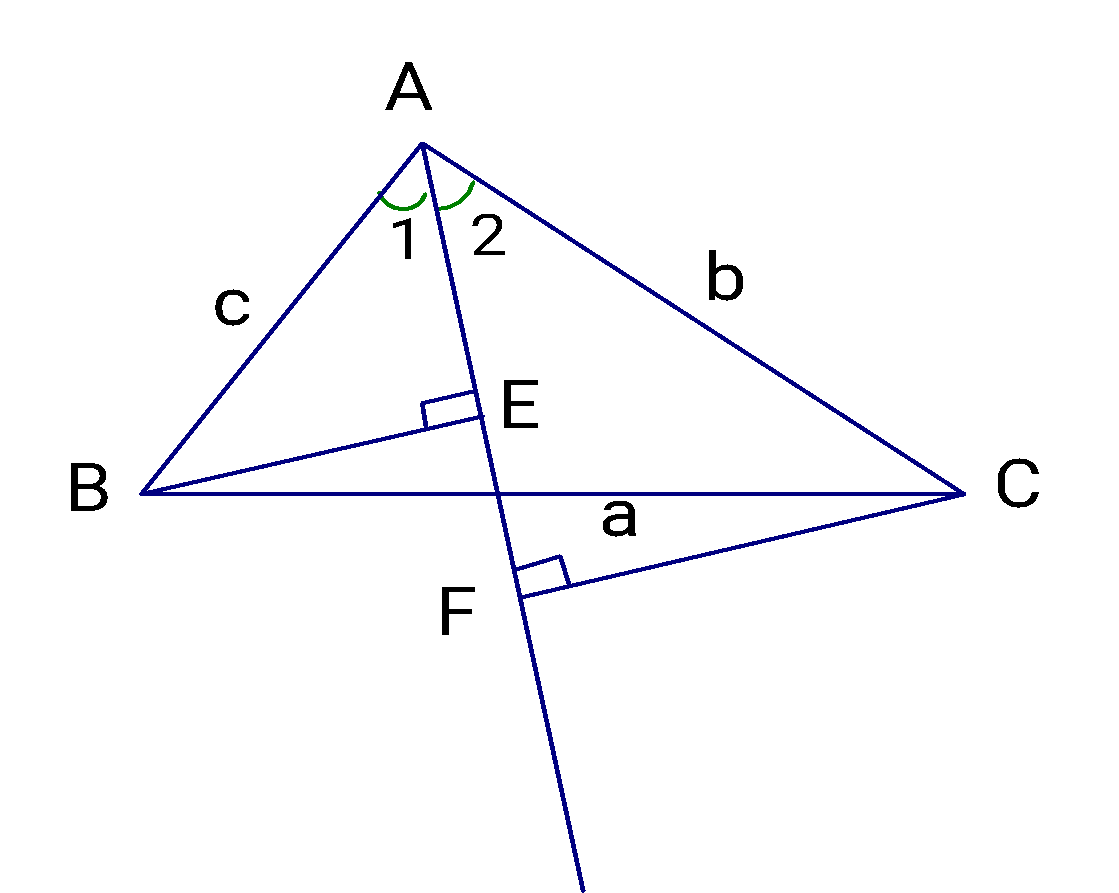
Gọi K là giao điểm của AH và BE.

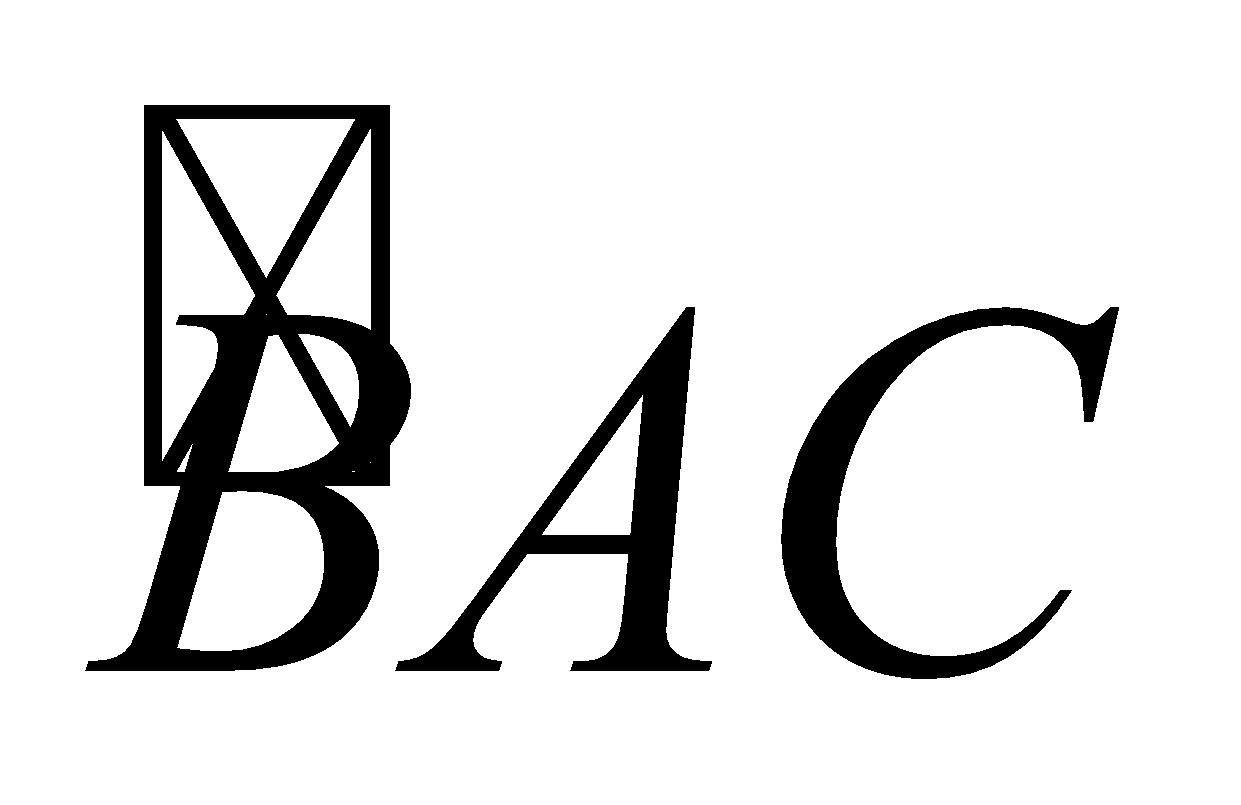
Ta có: 

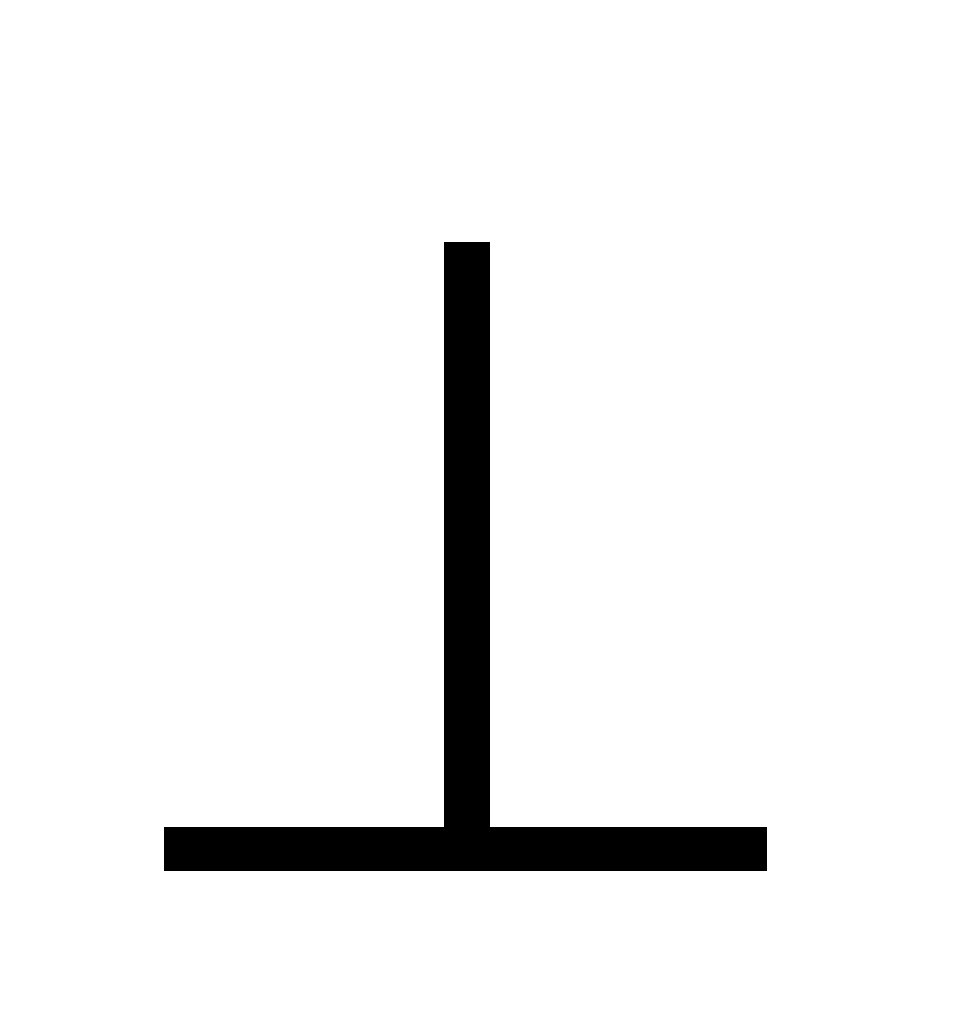
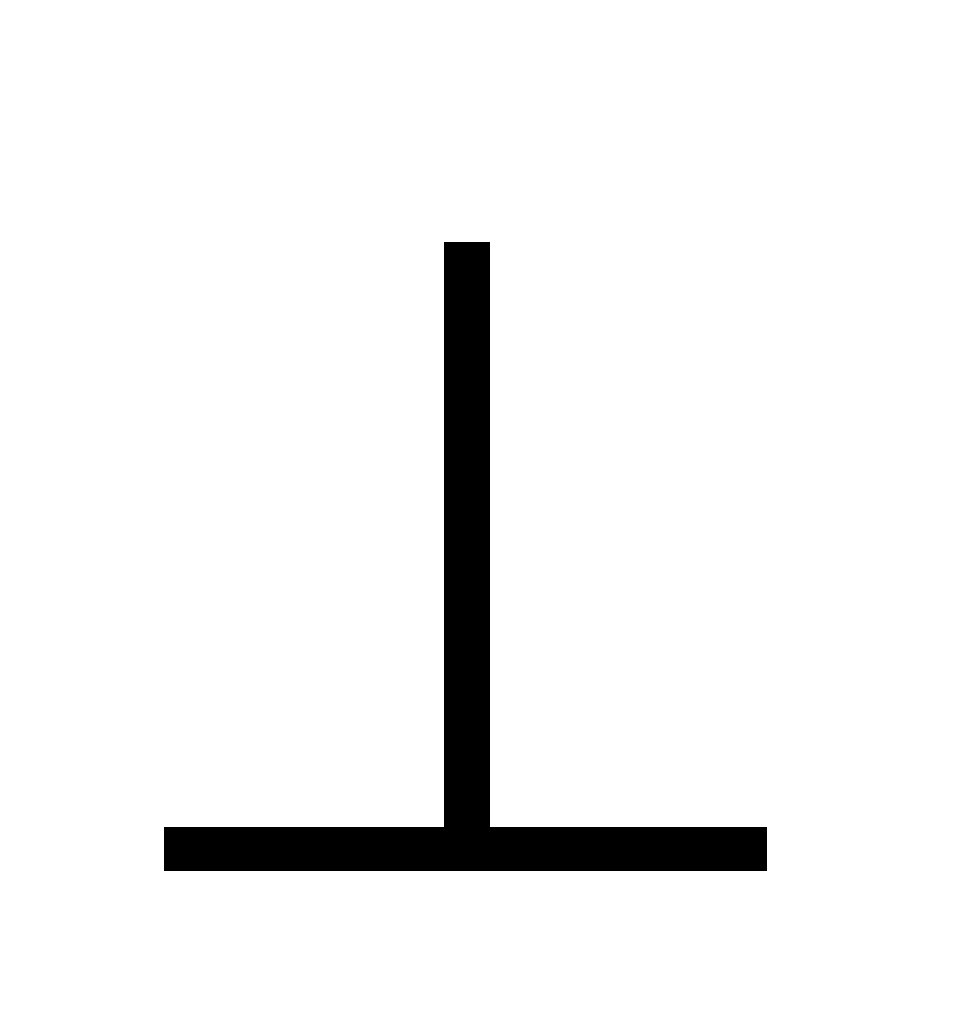
  (Vì ) 0.5 điểm

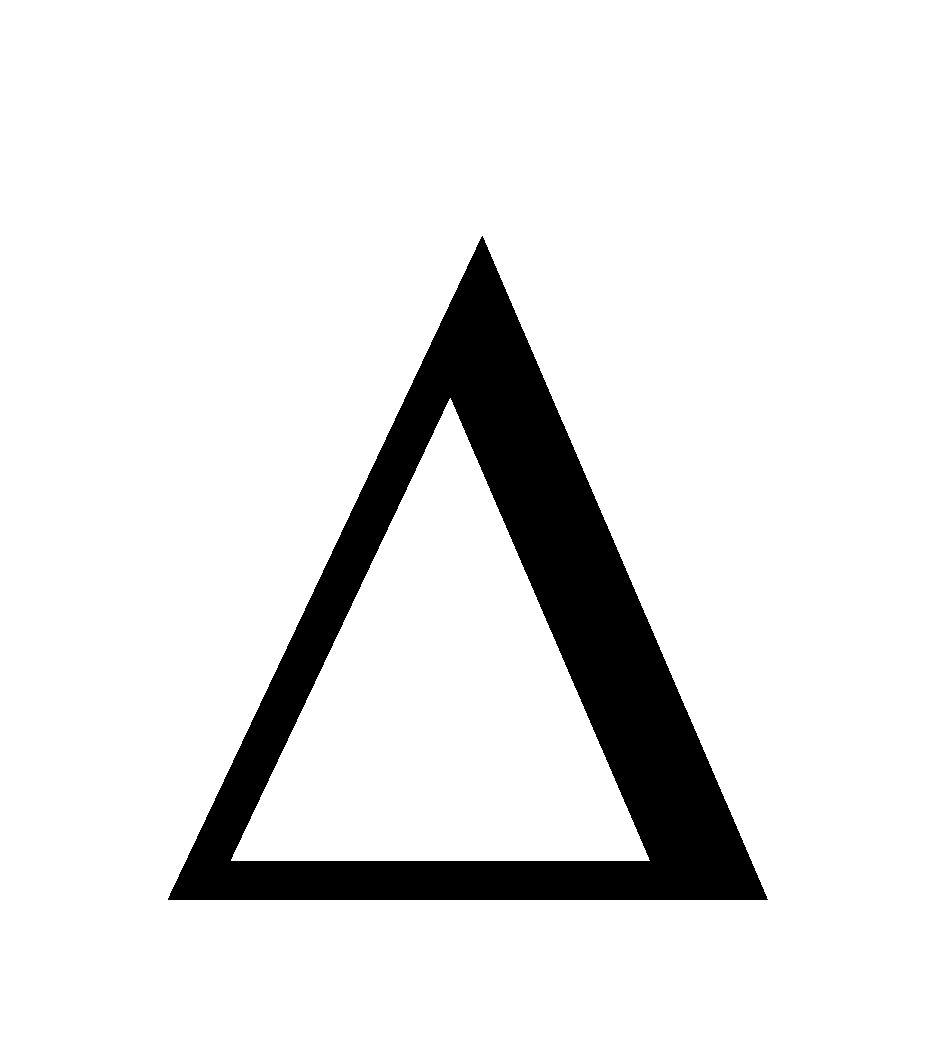
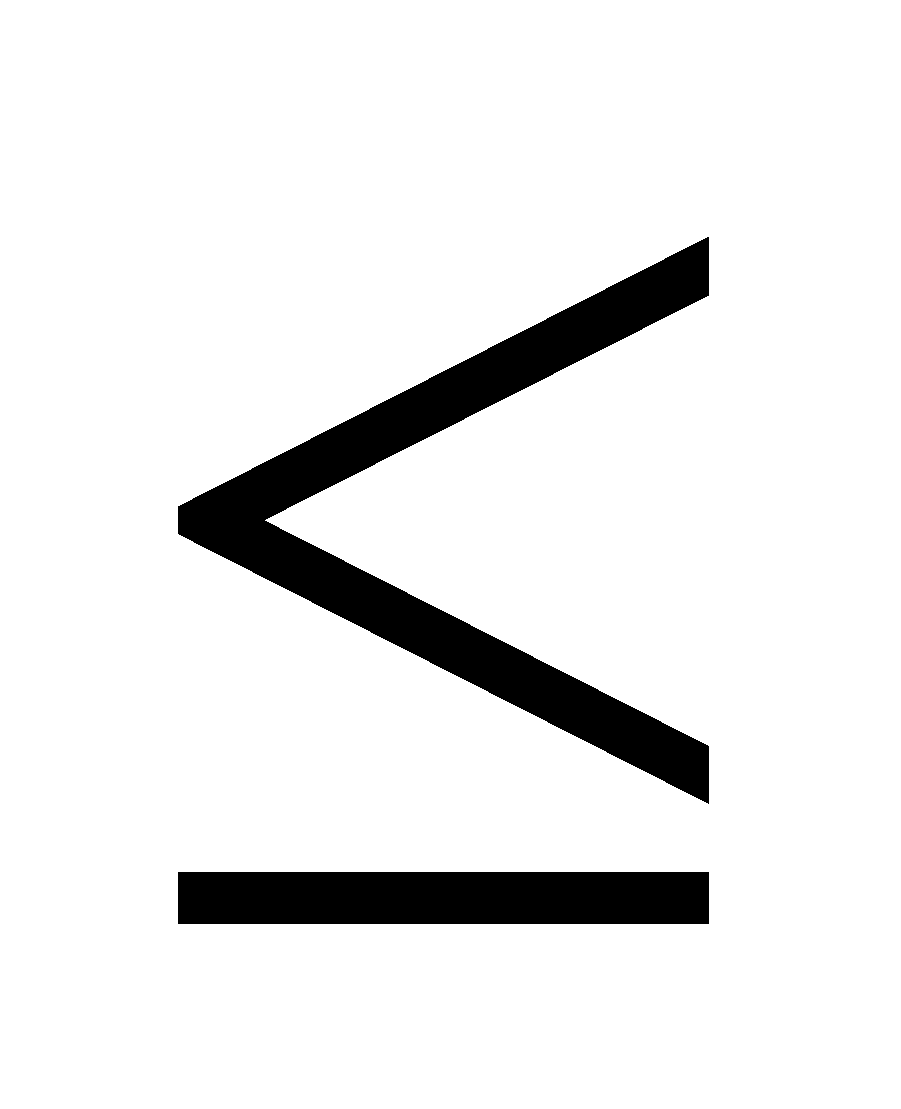
 AO  BE. 0.5 điểm

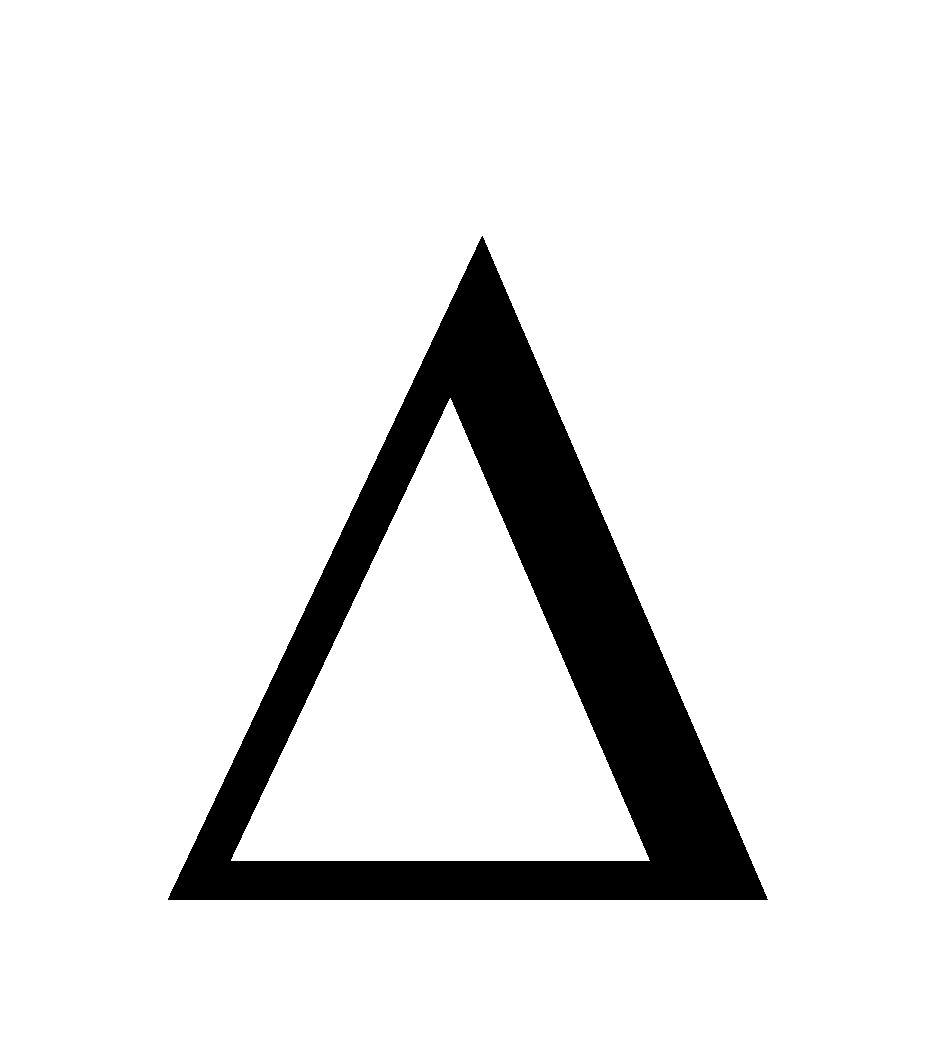
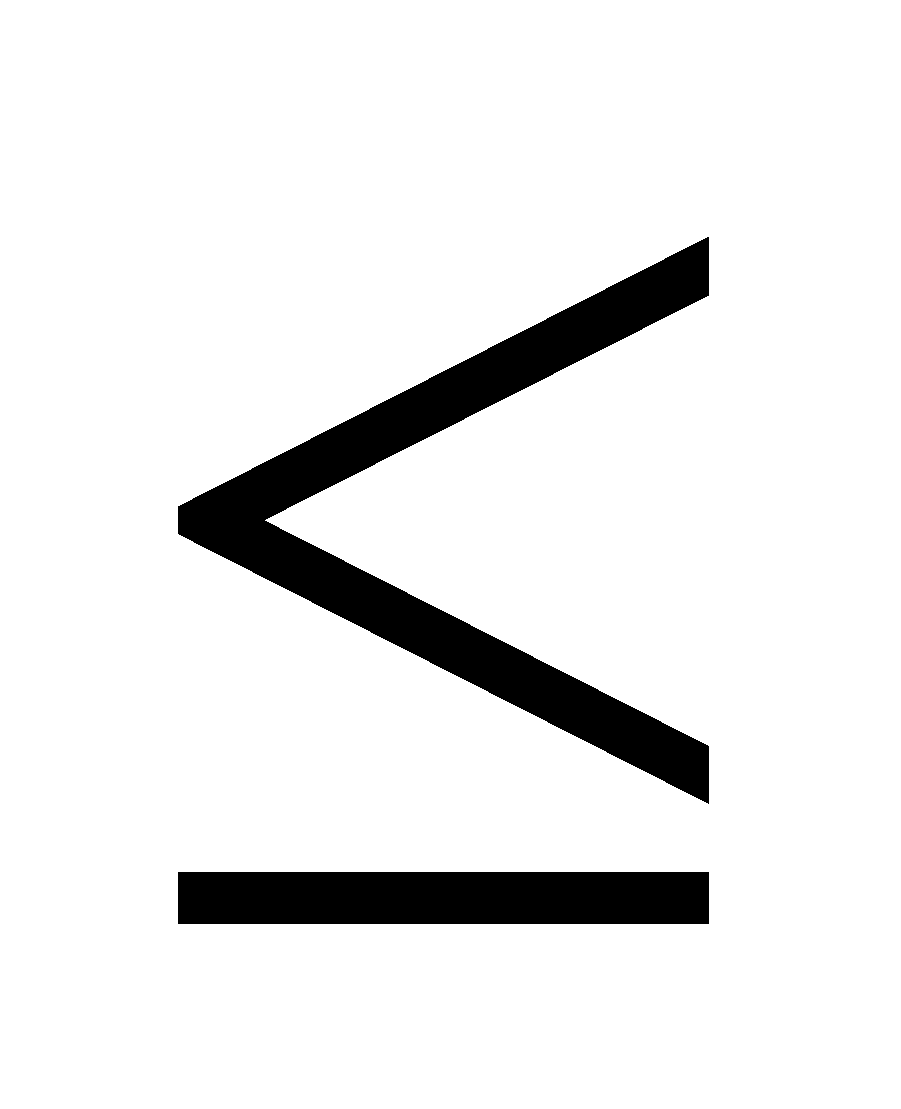
**Bài 7:**

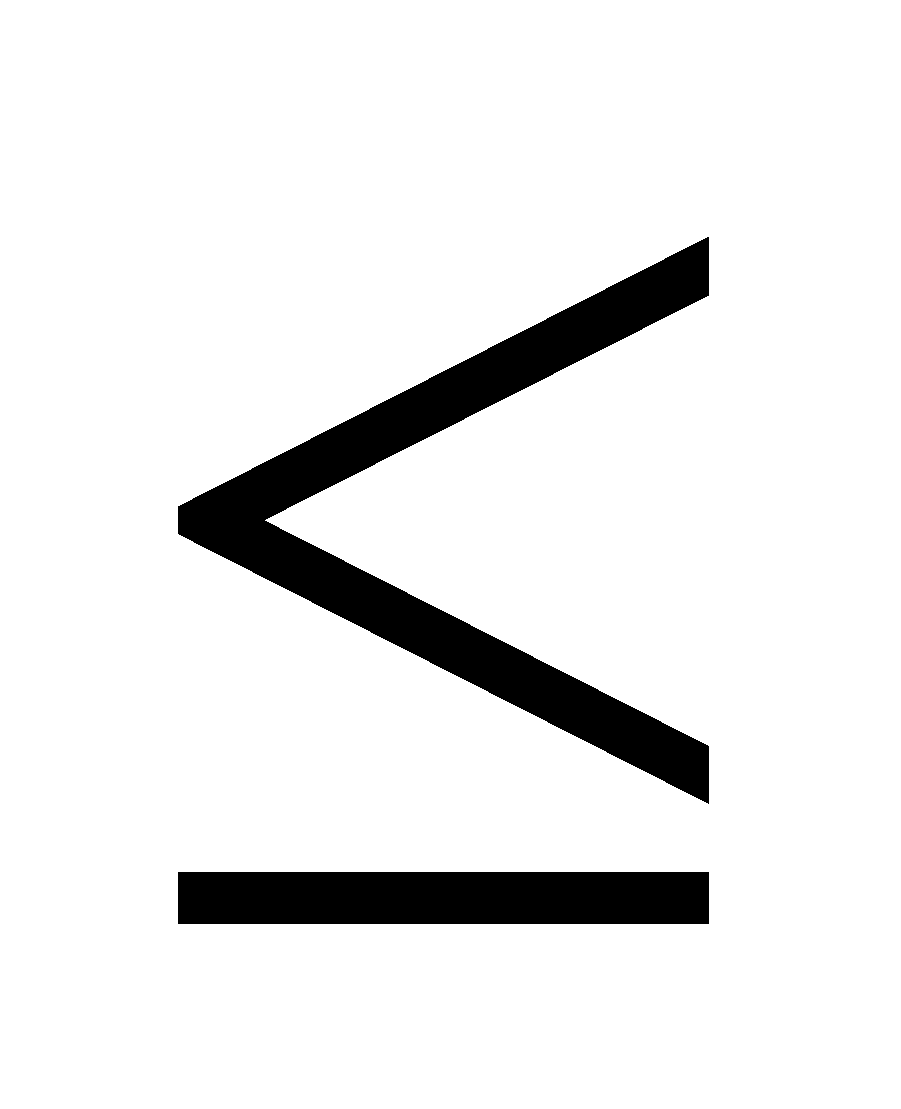


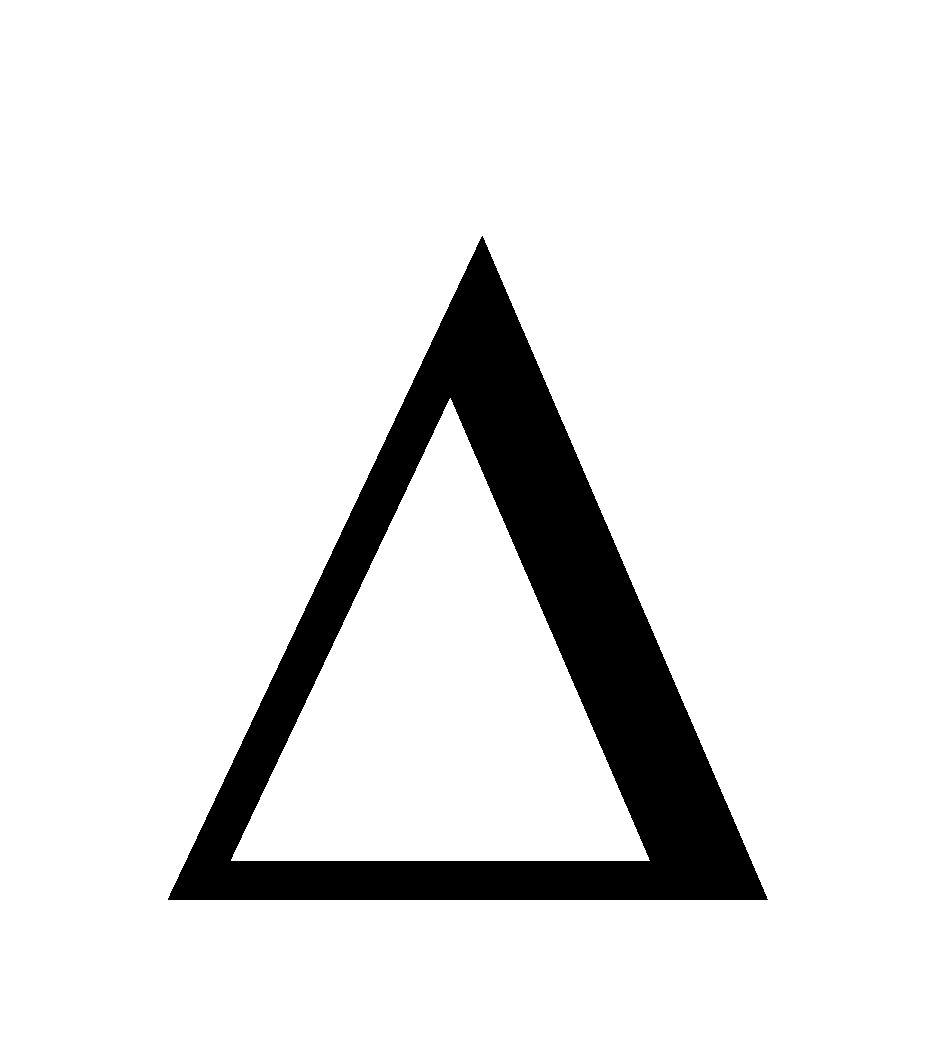
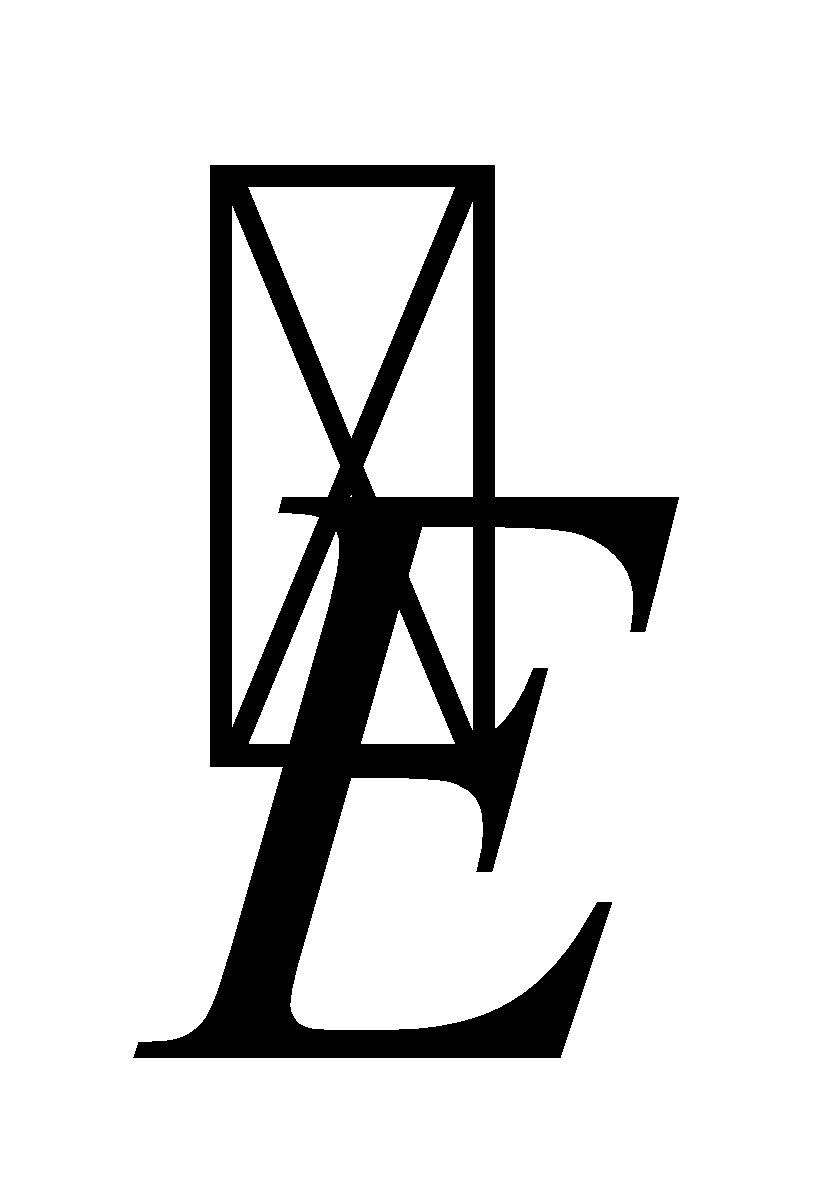
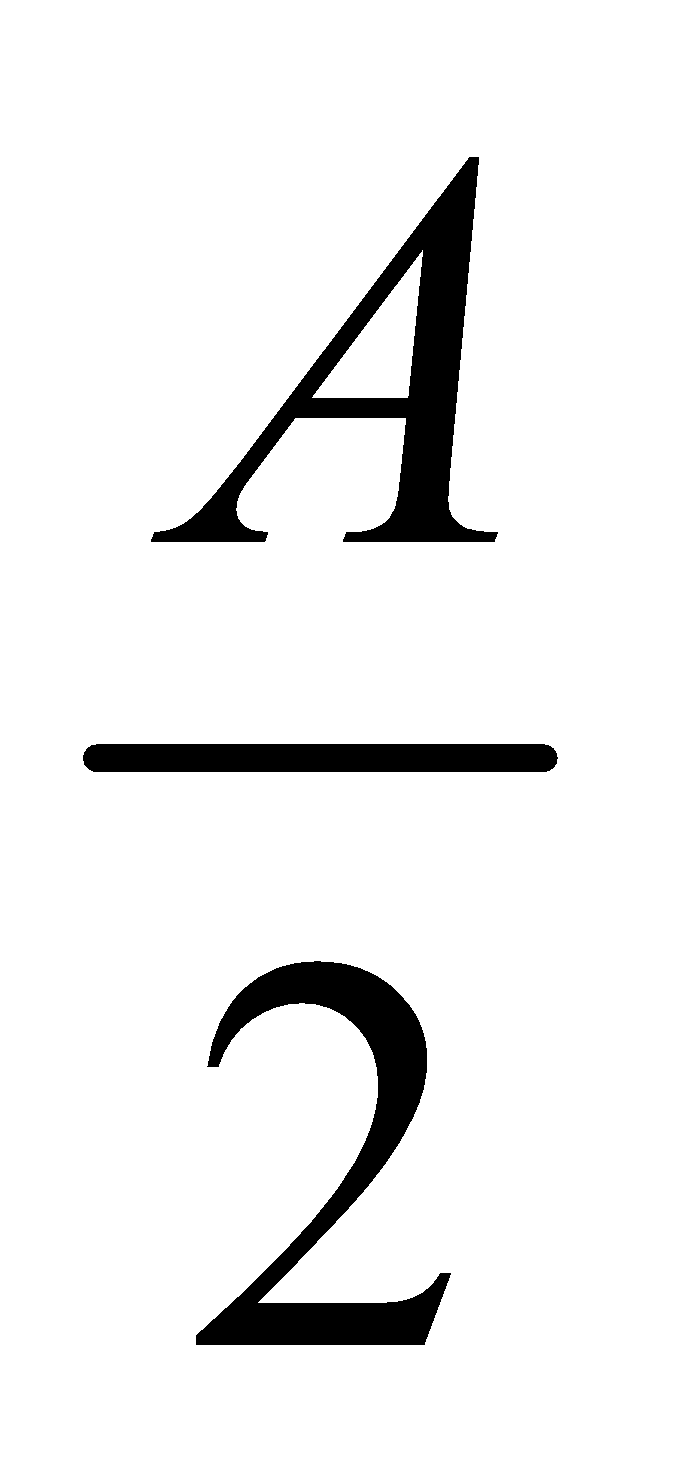
Kẻ phân giác AD của 

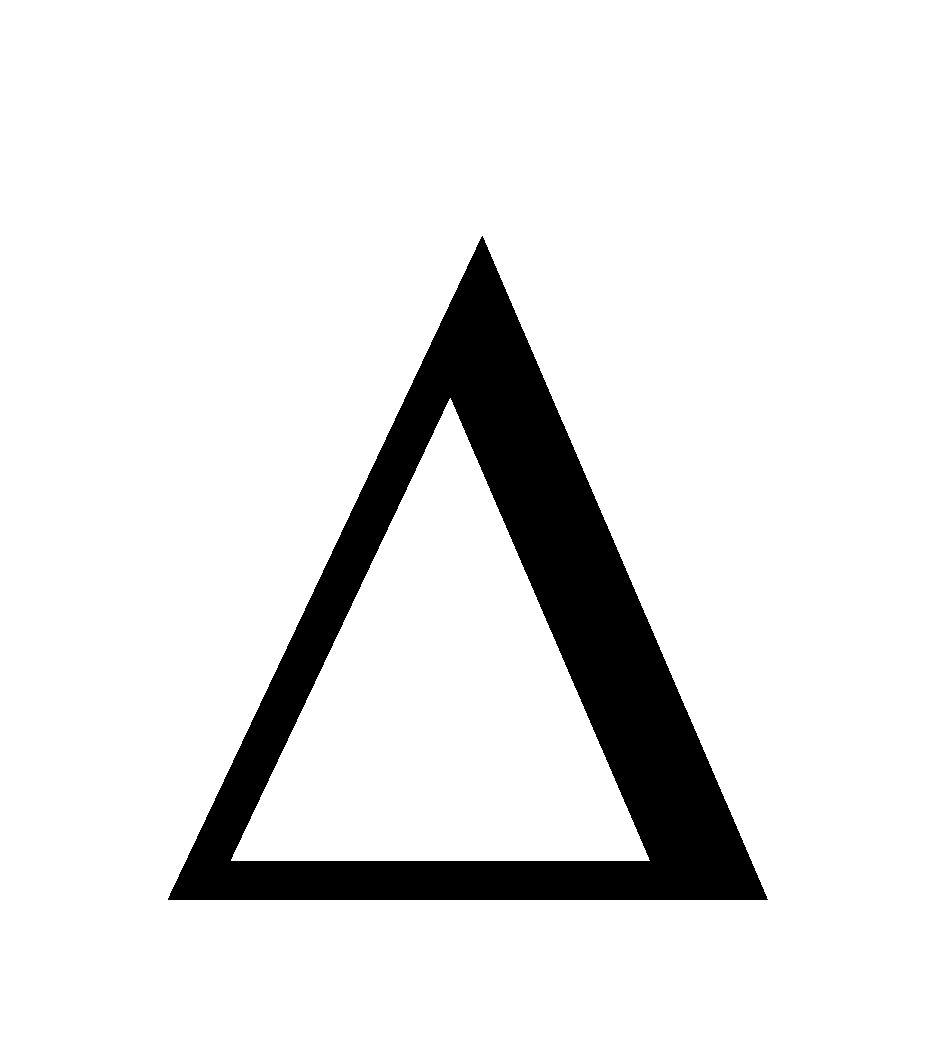
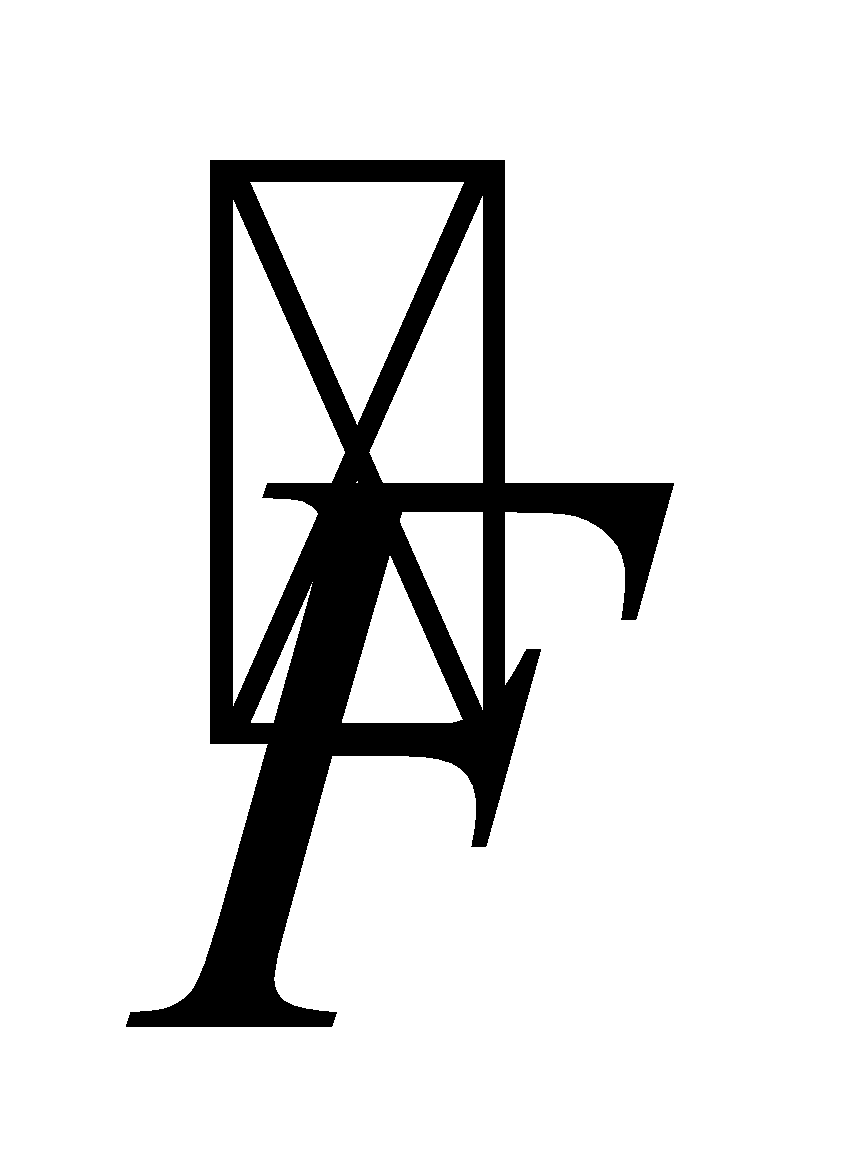
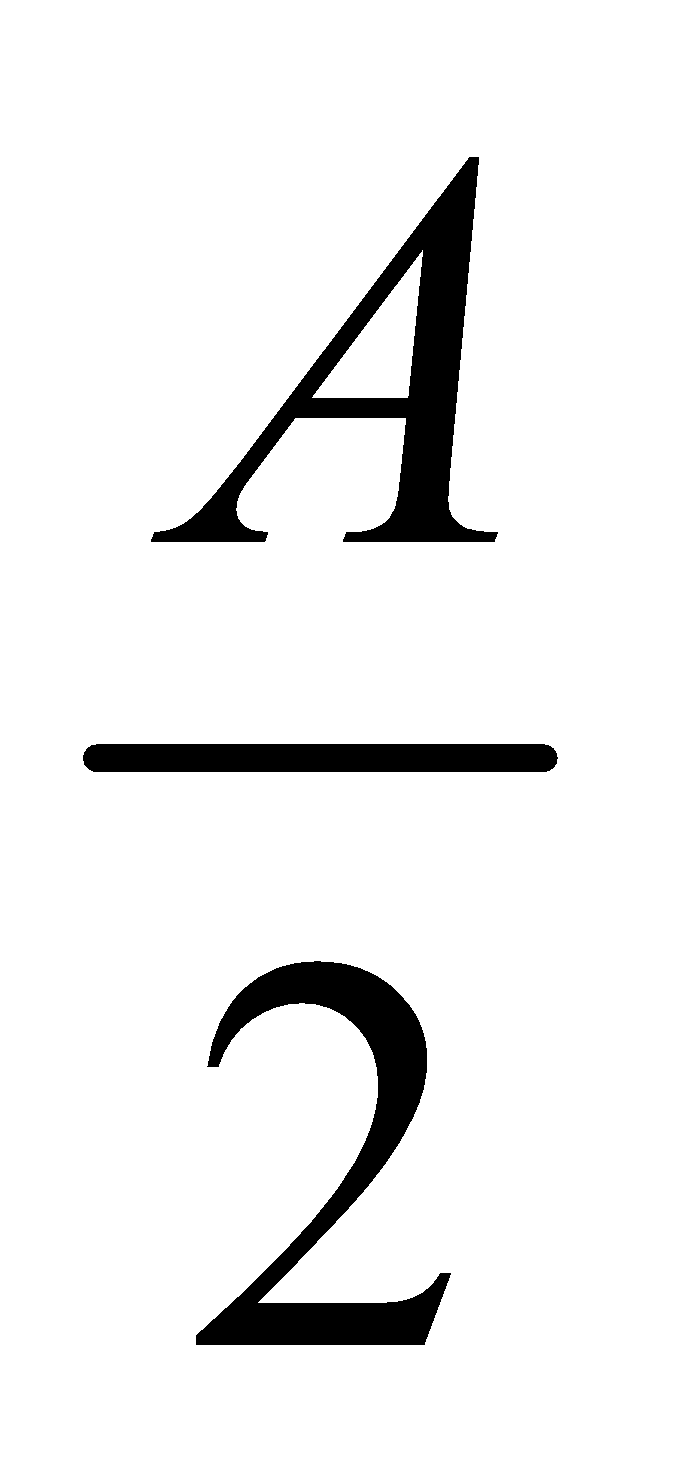
kẻ BE  AD; CF  AD

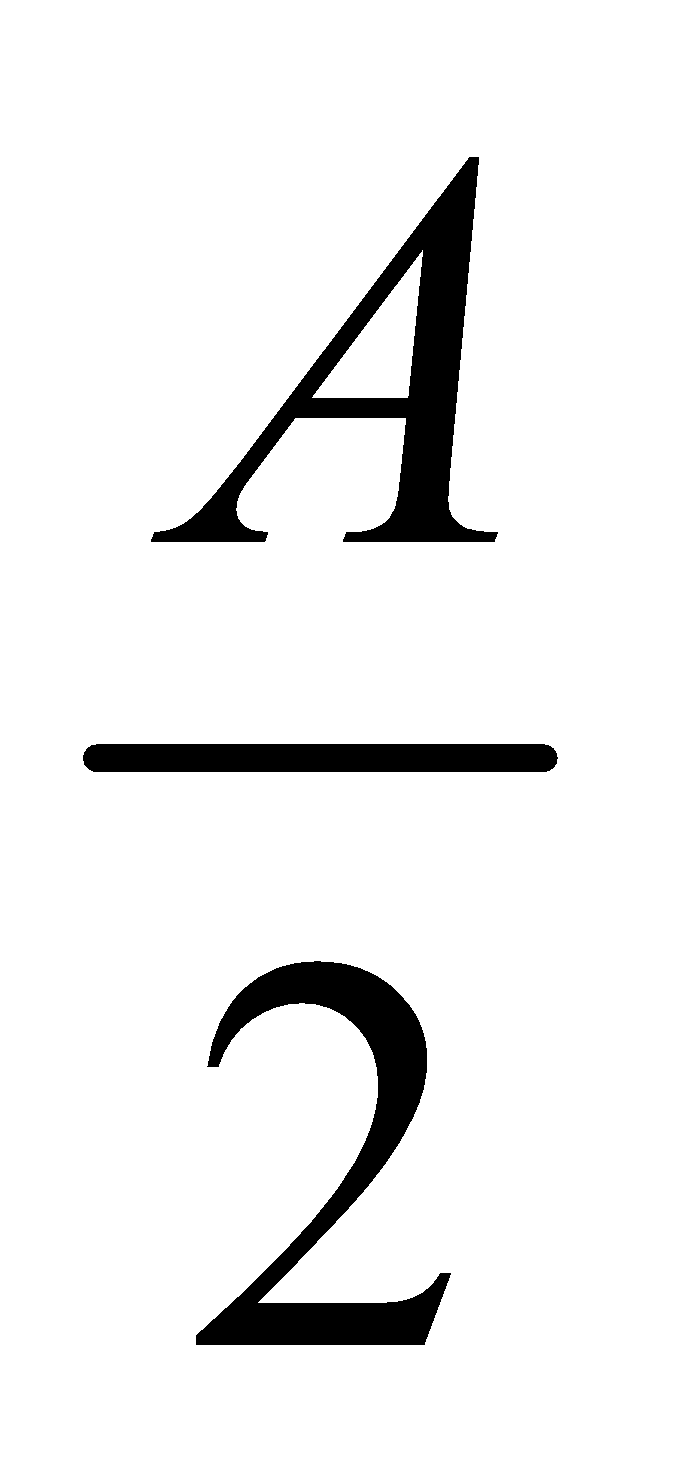
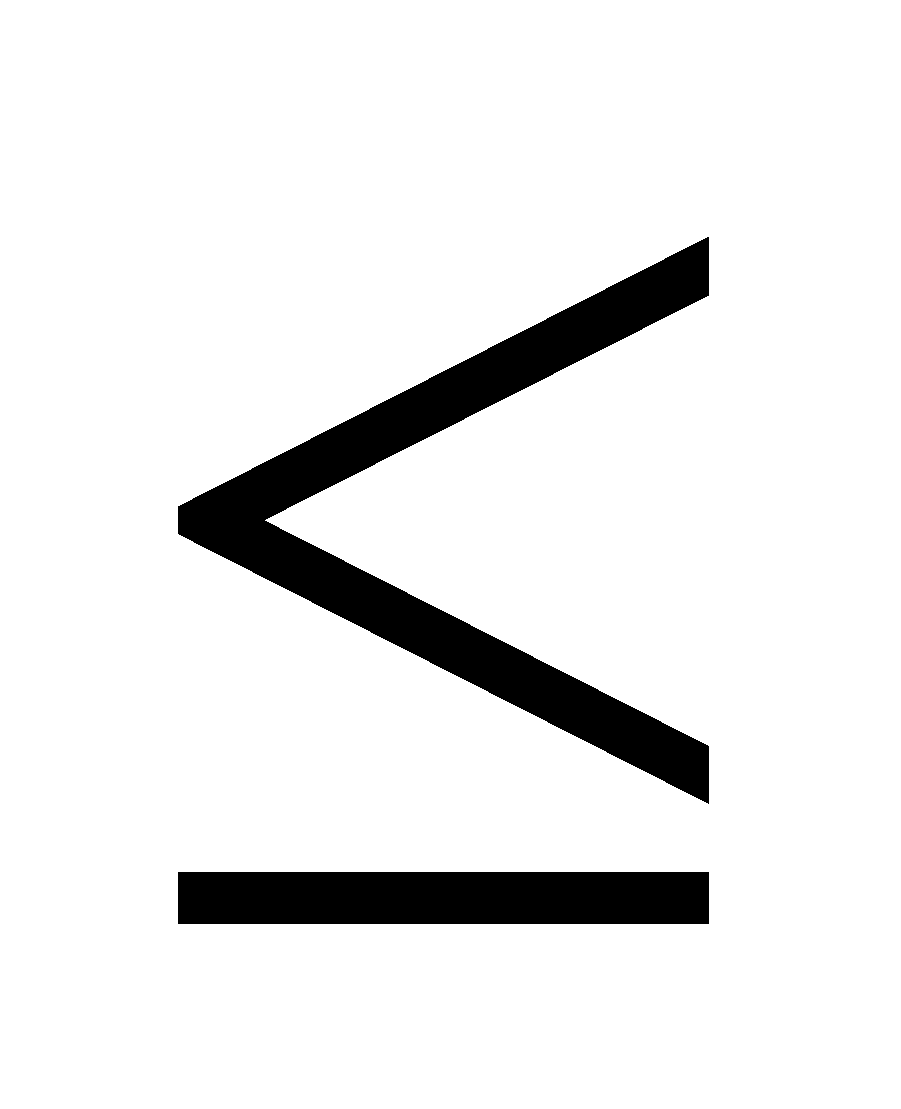
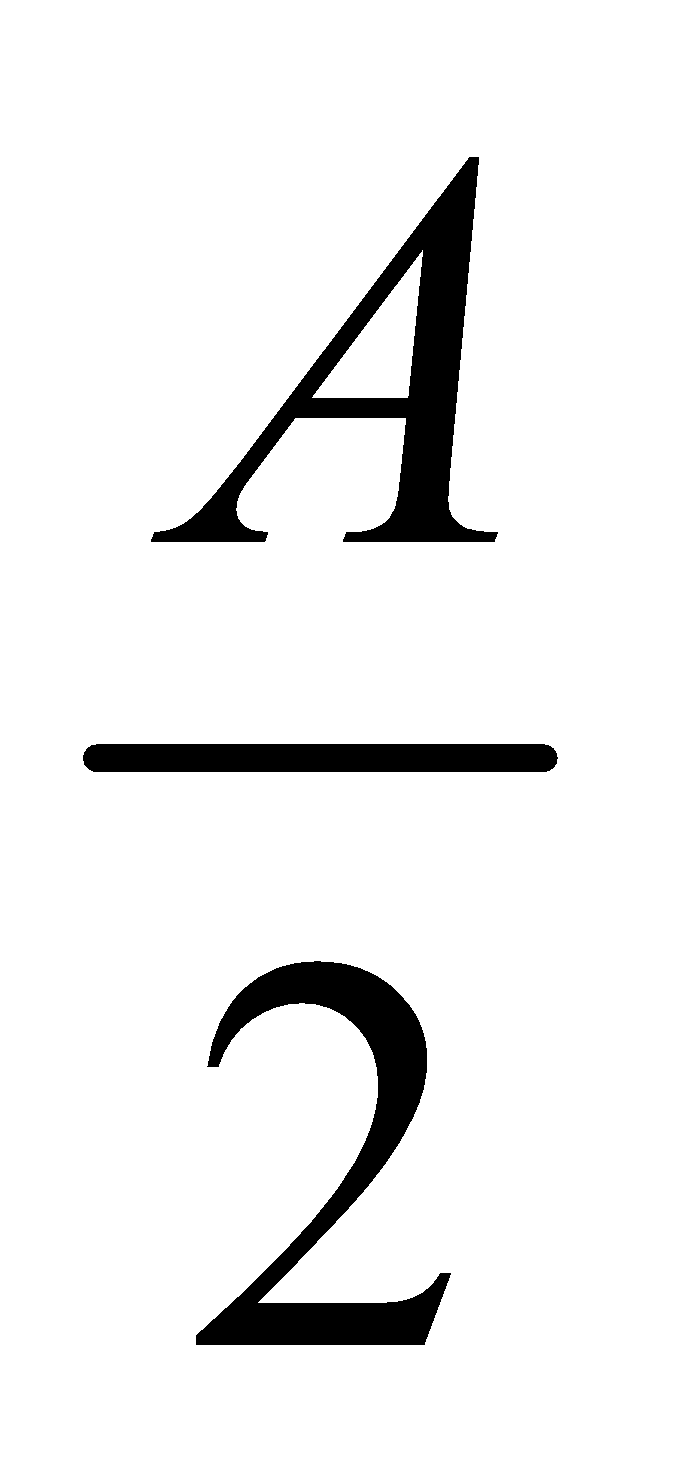
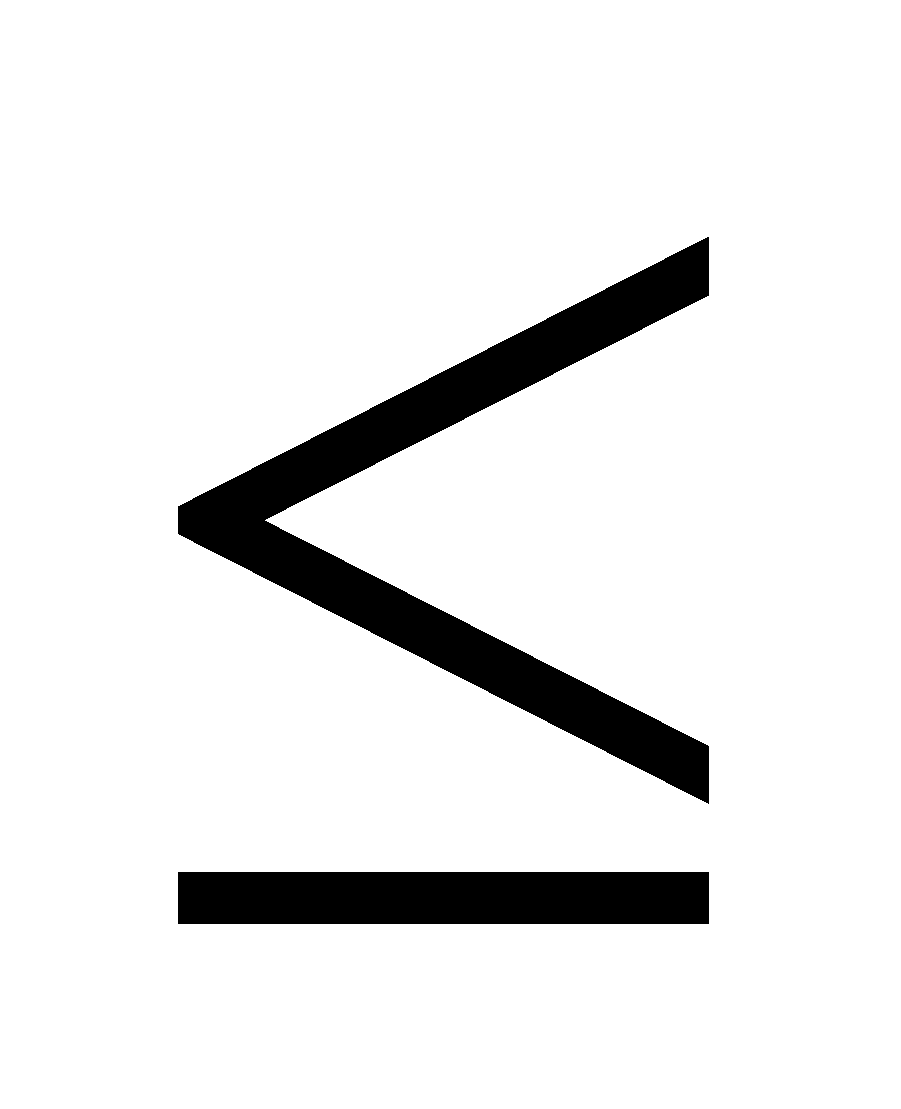
BED vuông tại E  BE  BD

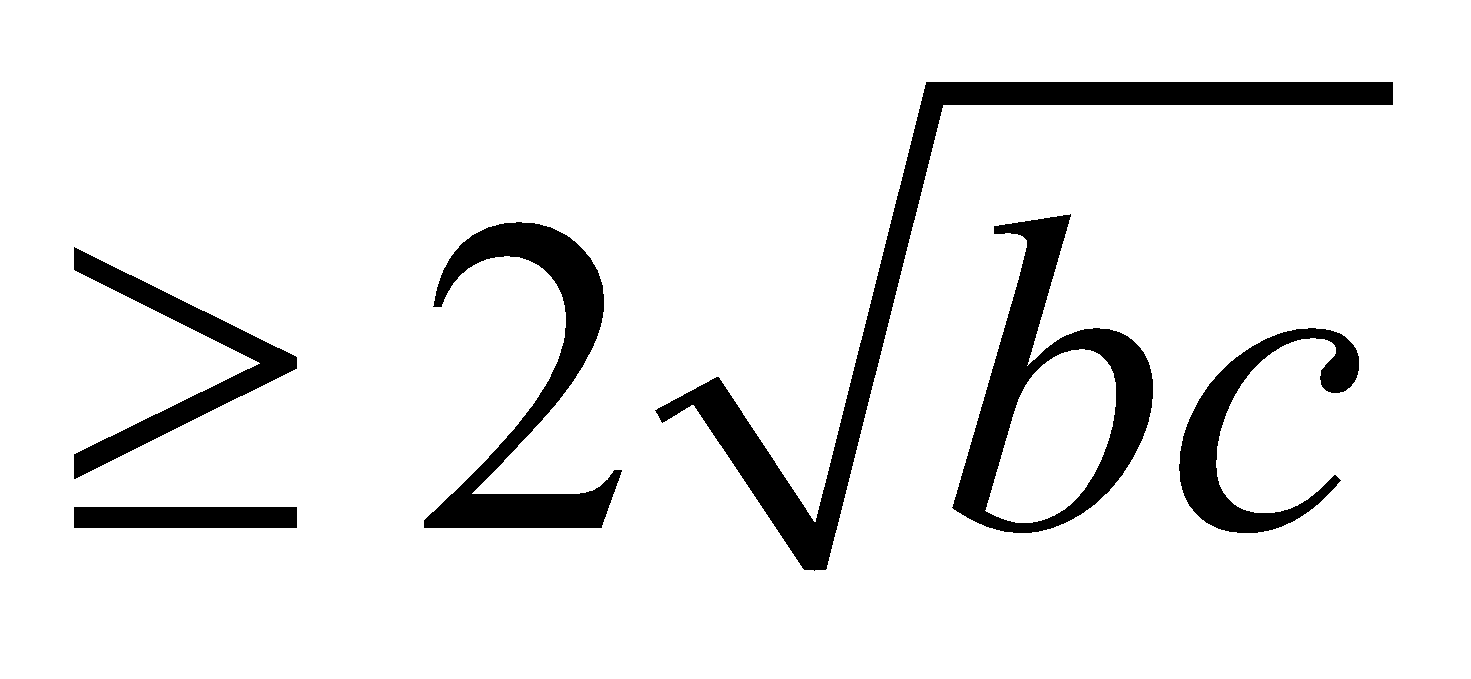
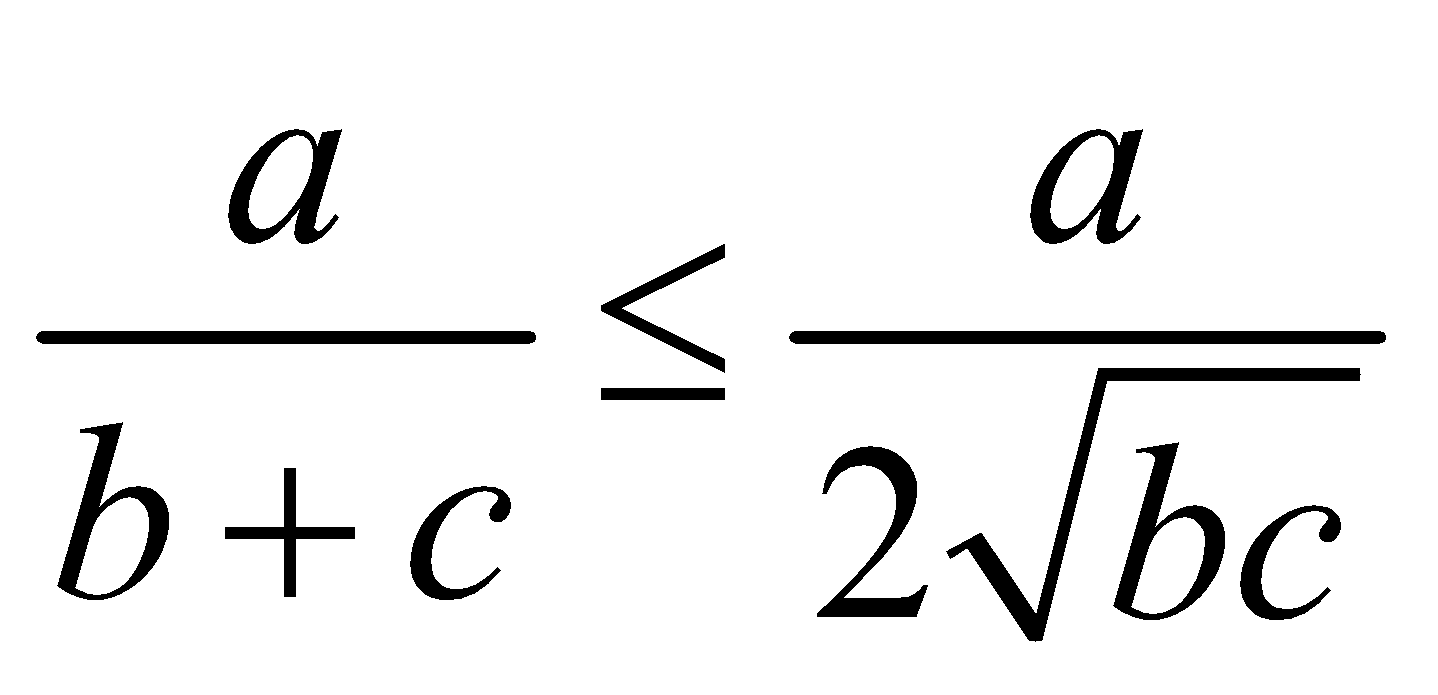
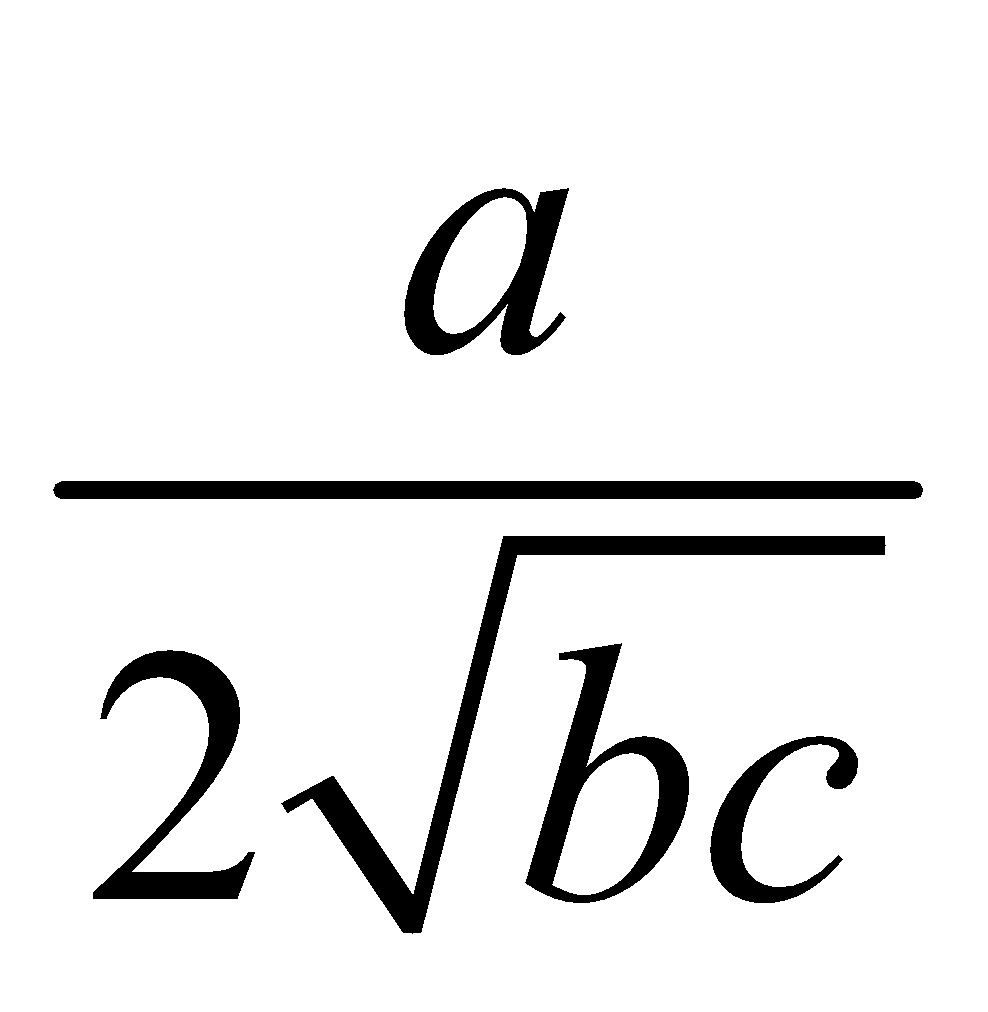
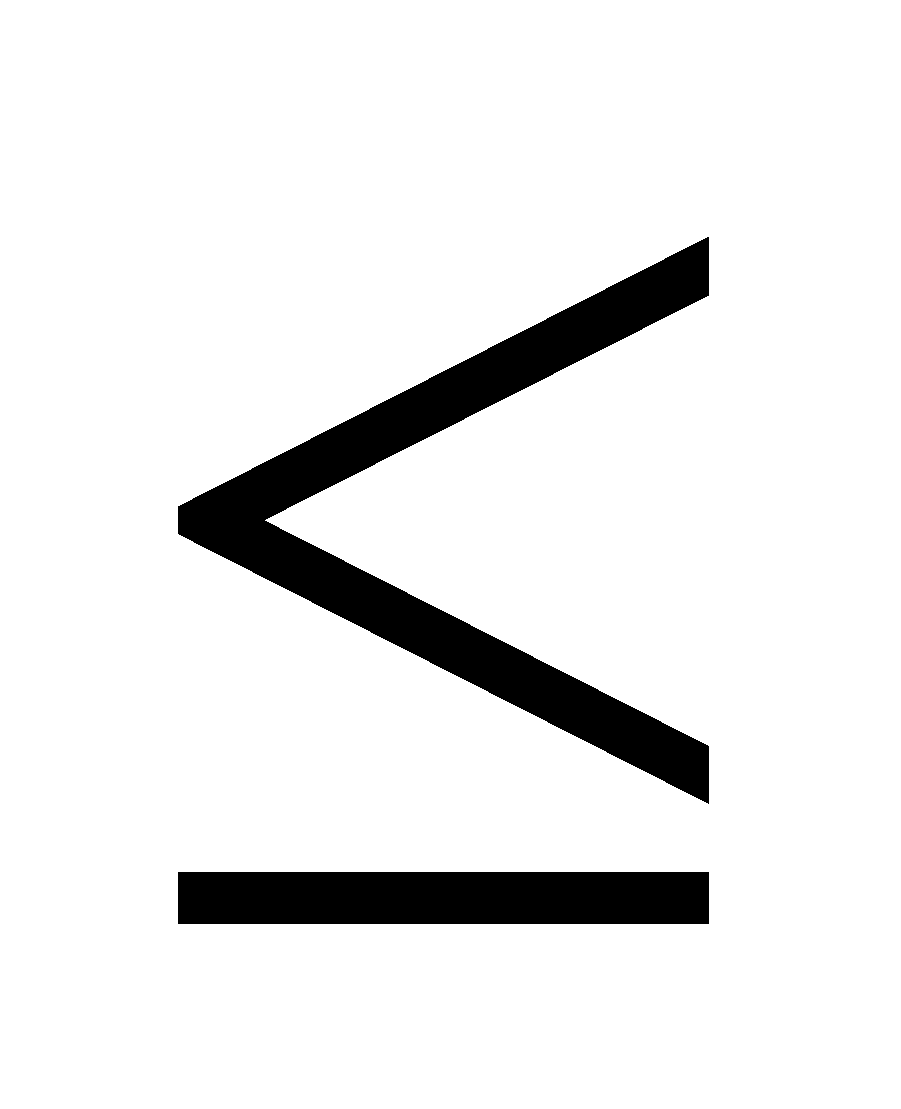
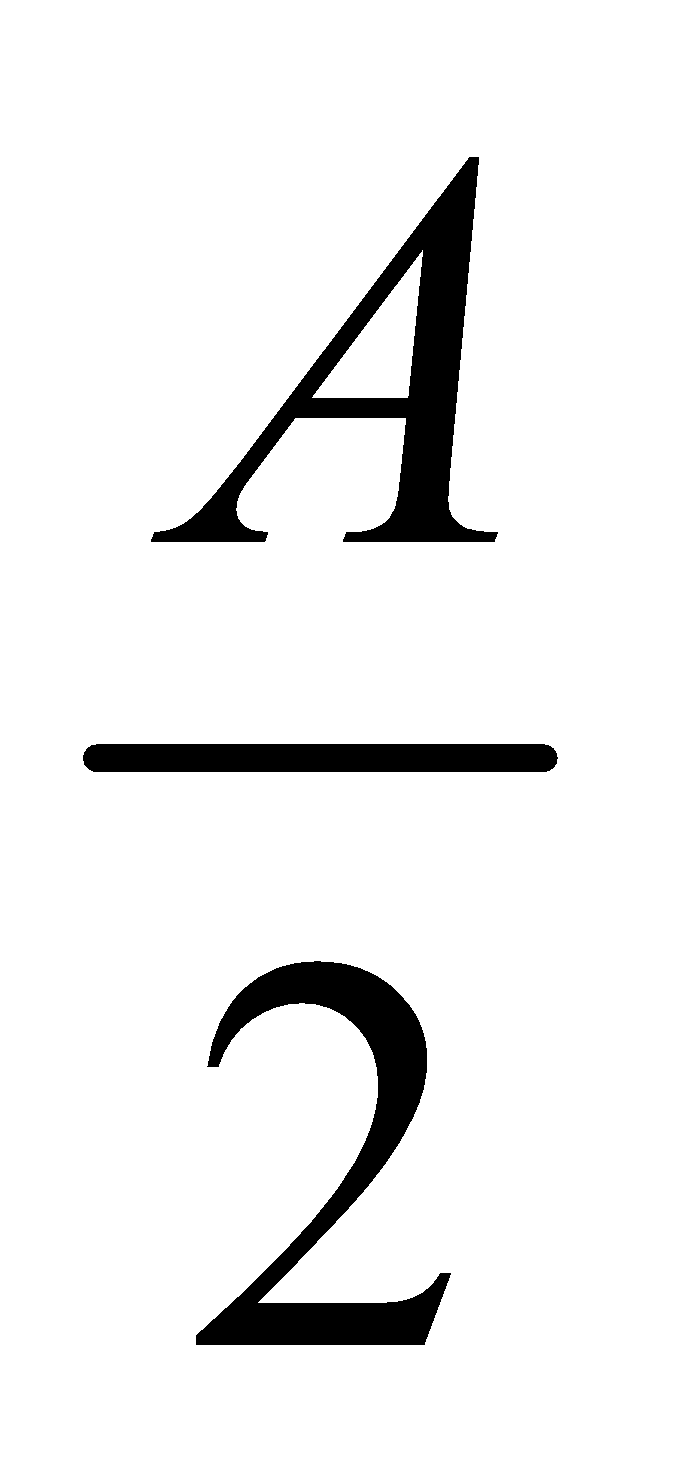
CFD vuông tại F  CF  CD

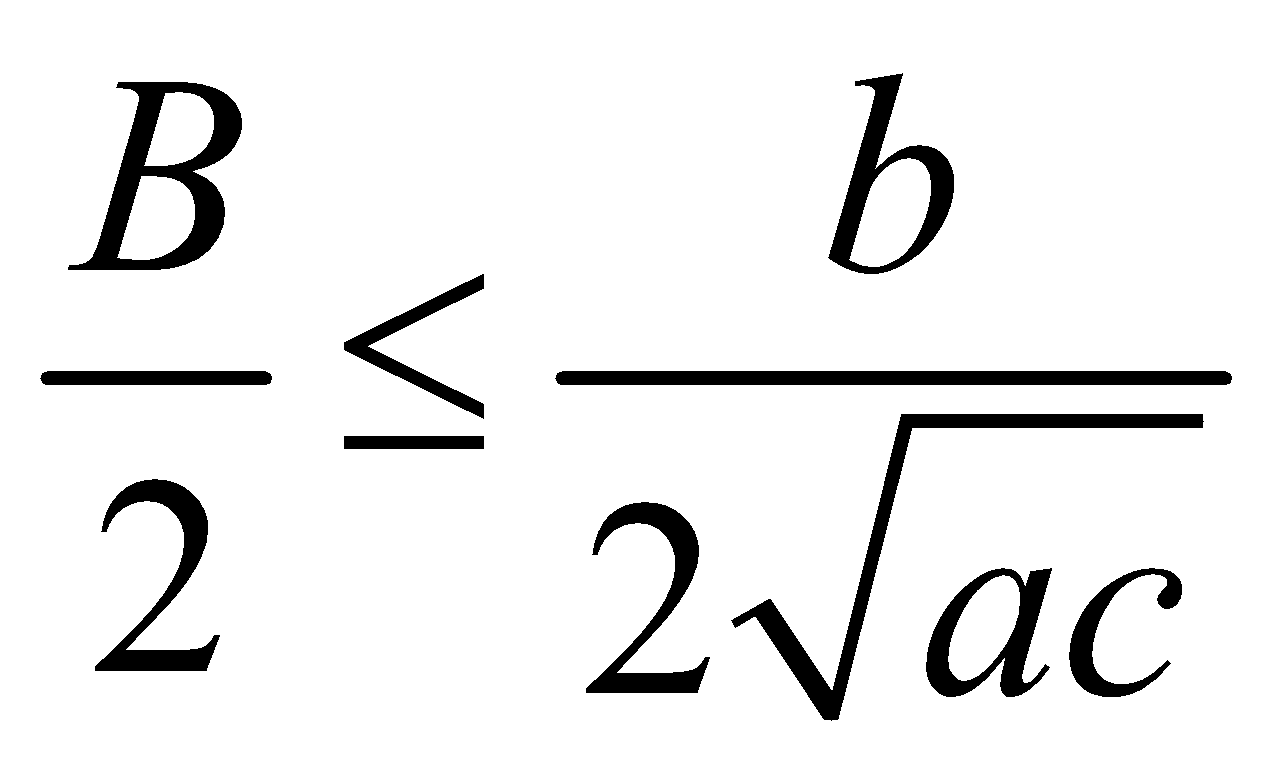
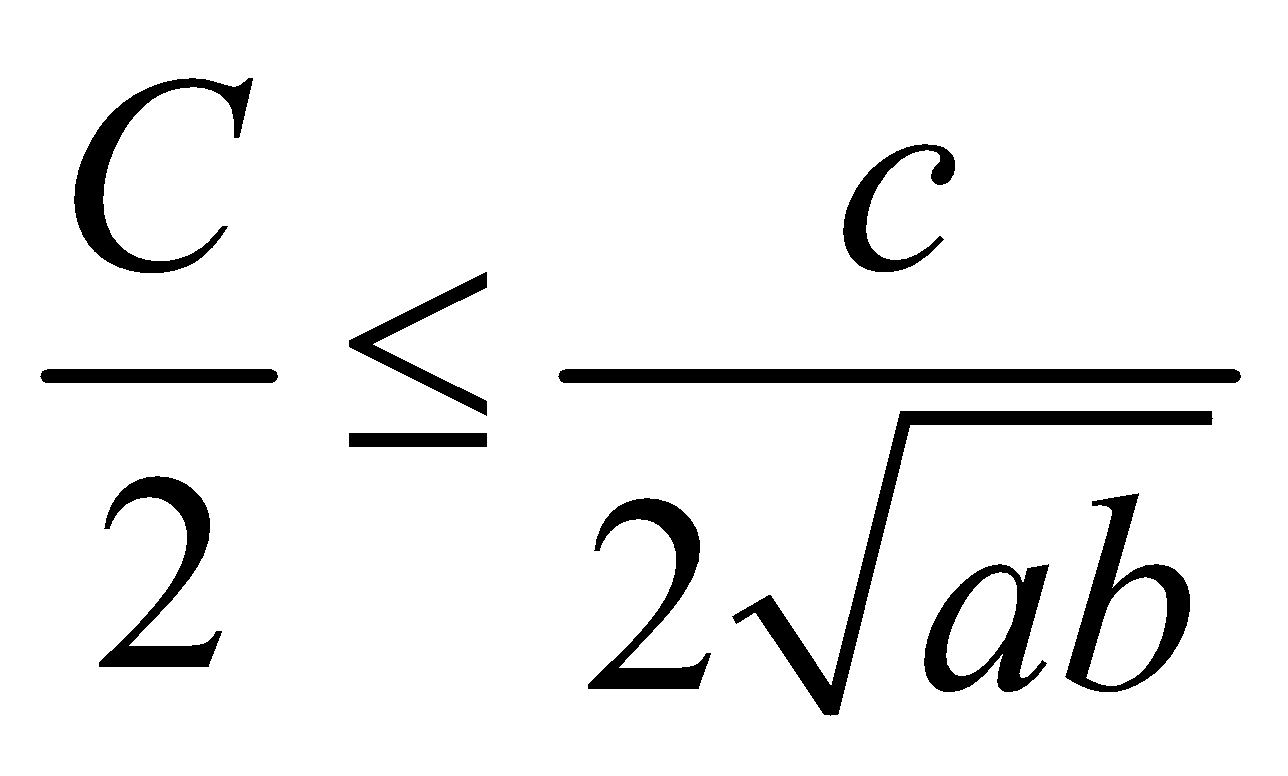
 BE + CF  BD + CD = a 0.5 điểm

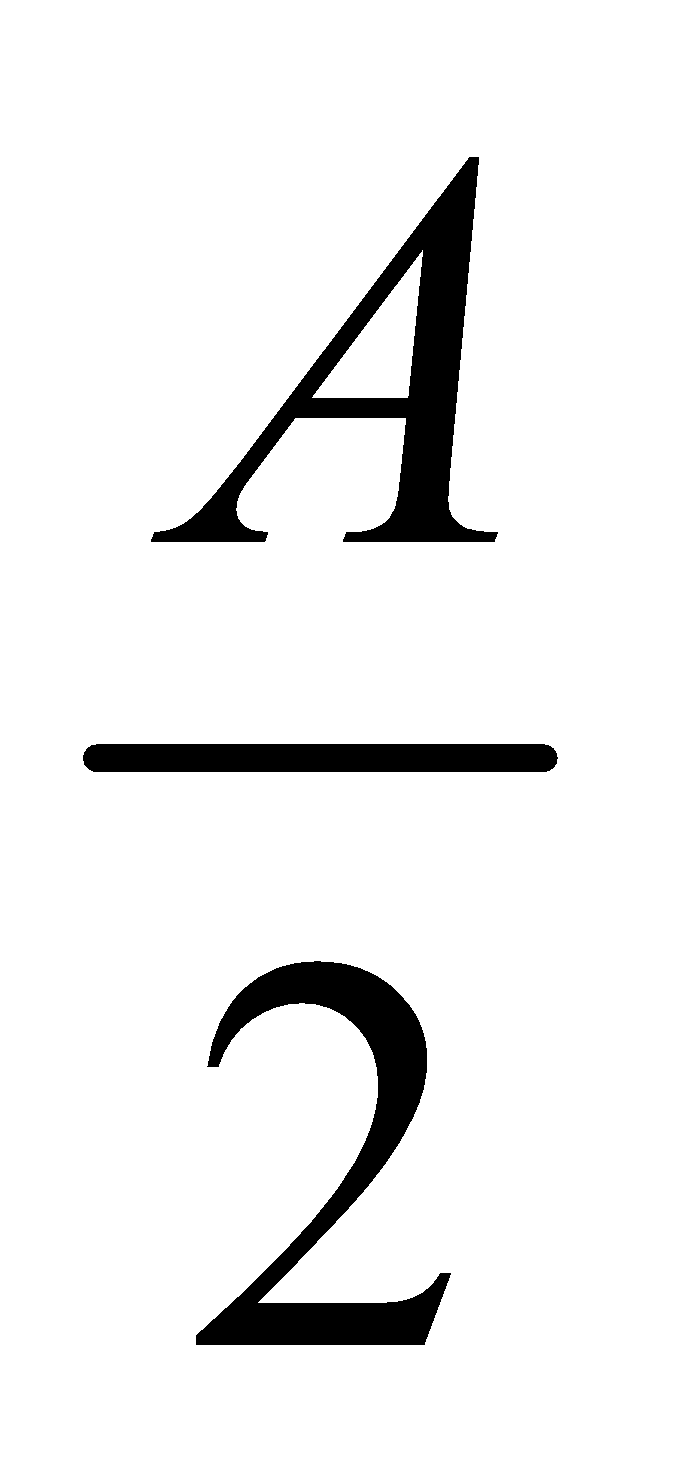
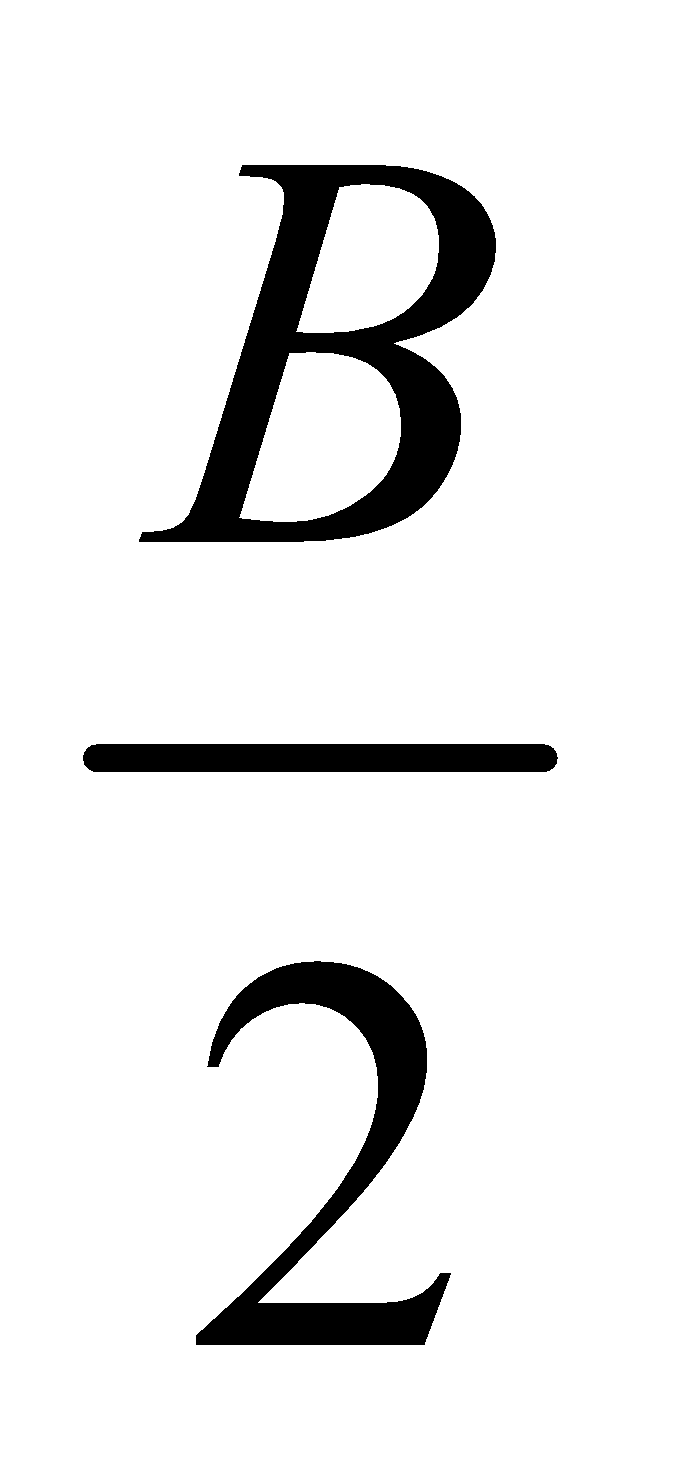
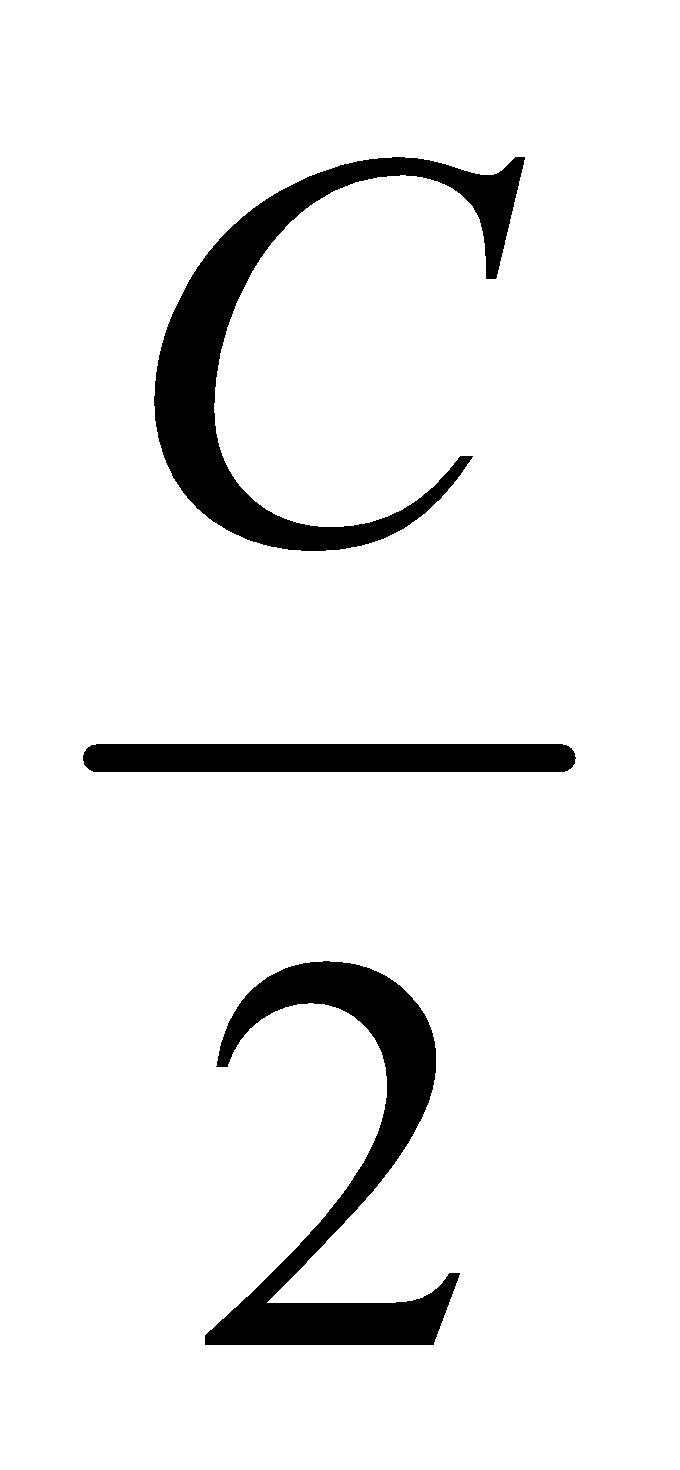
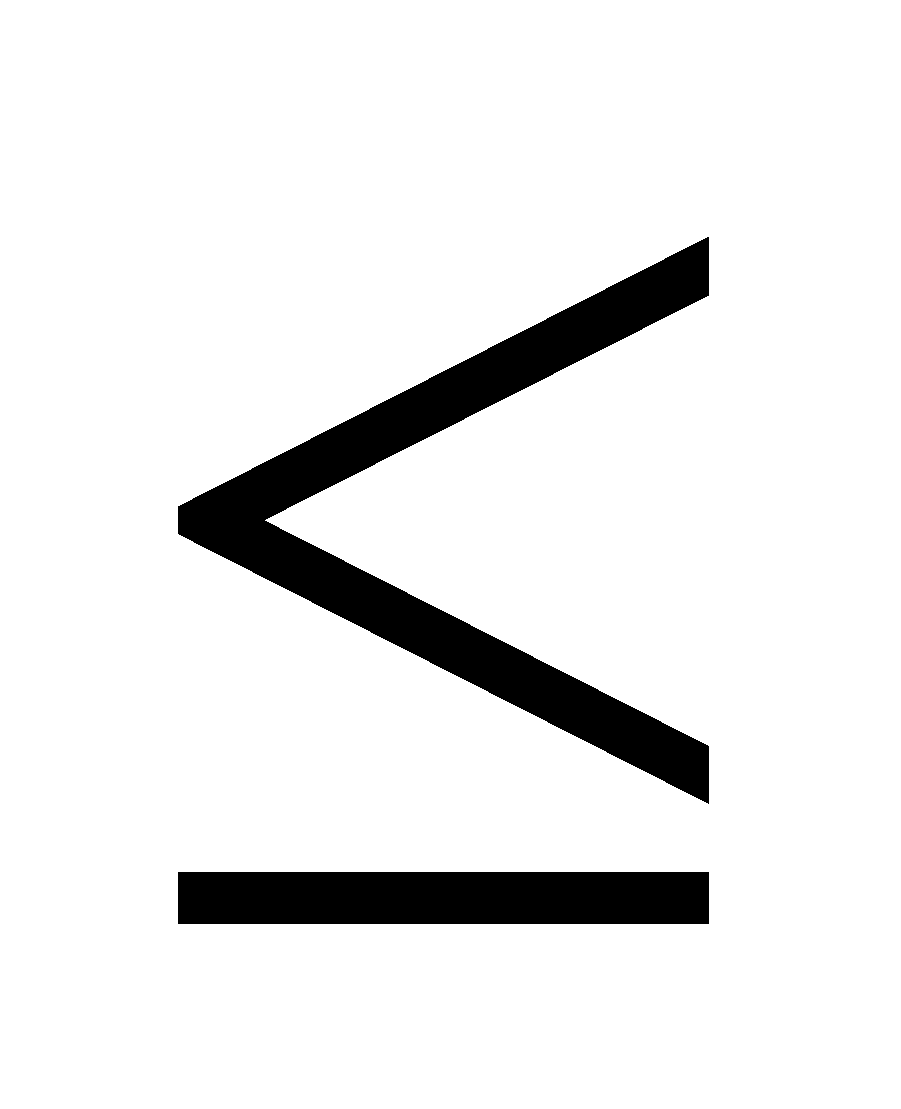
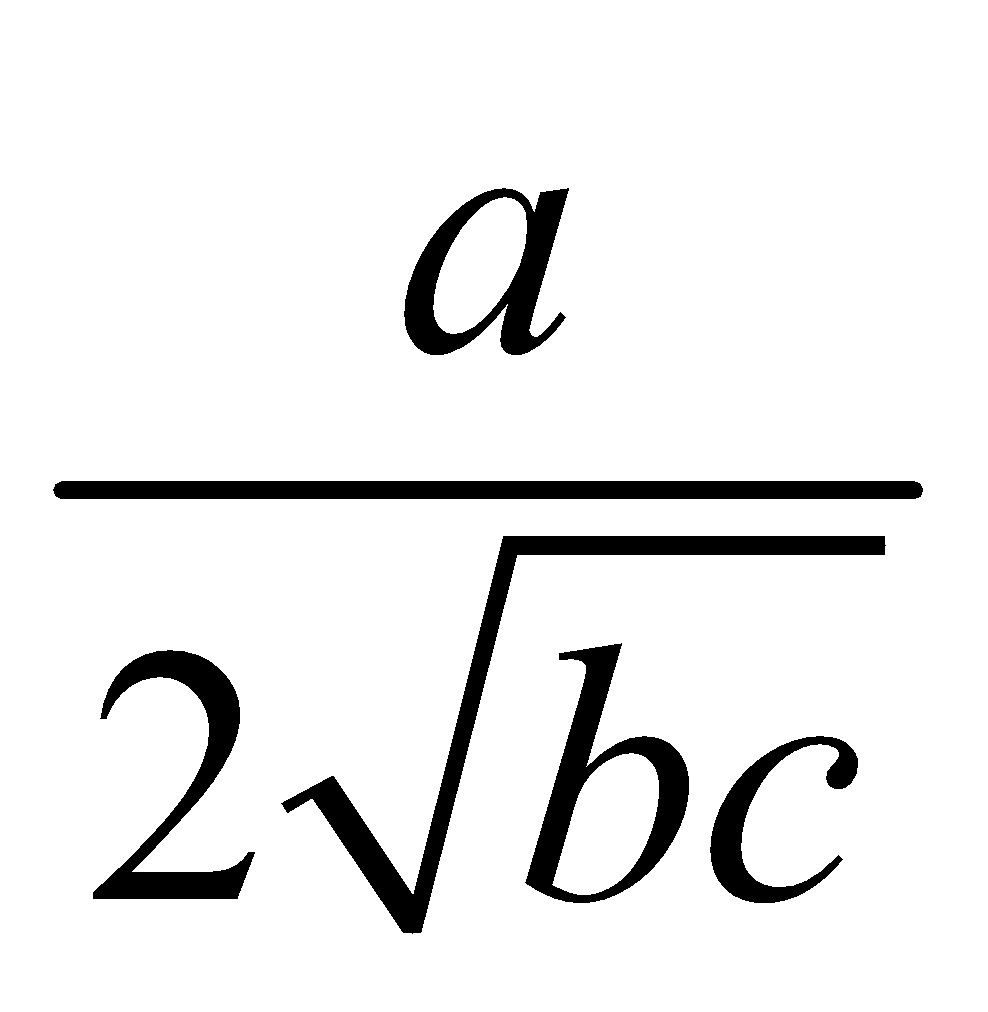
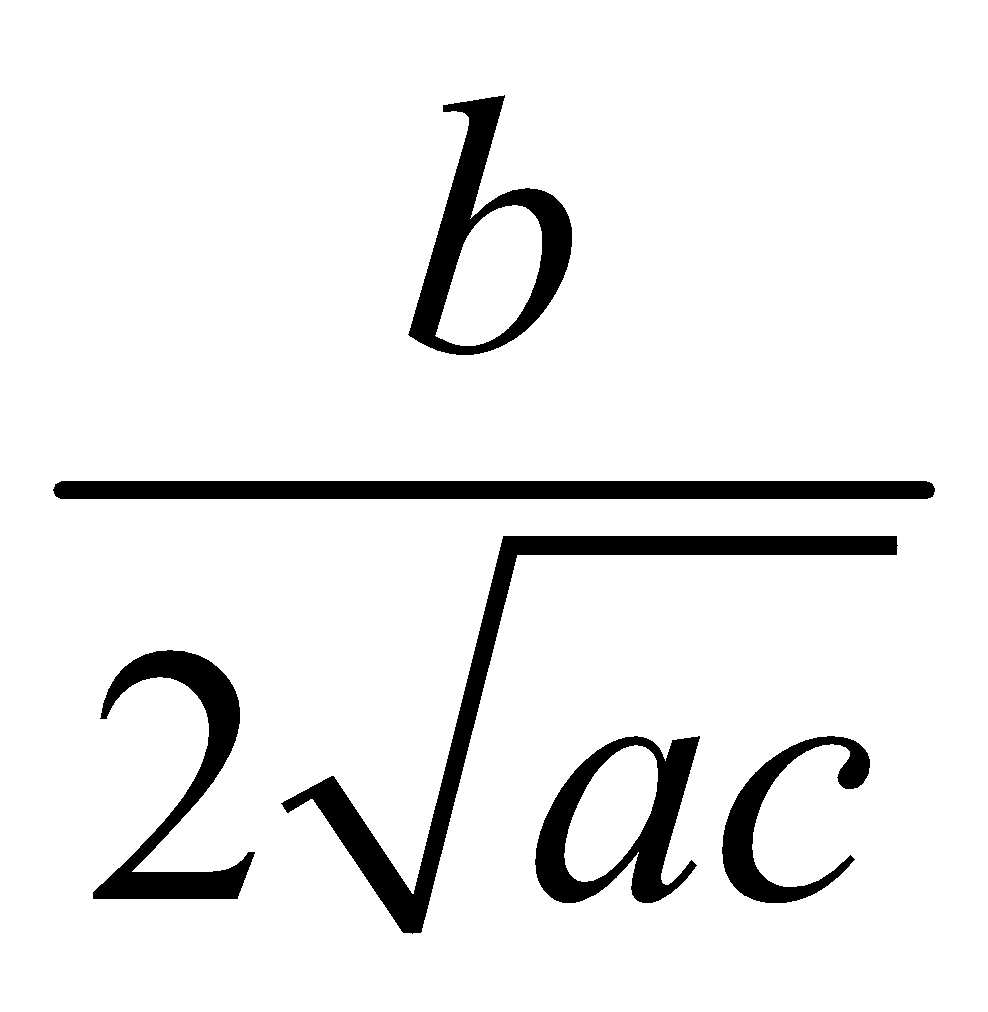
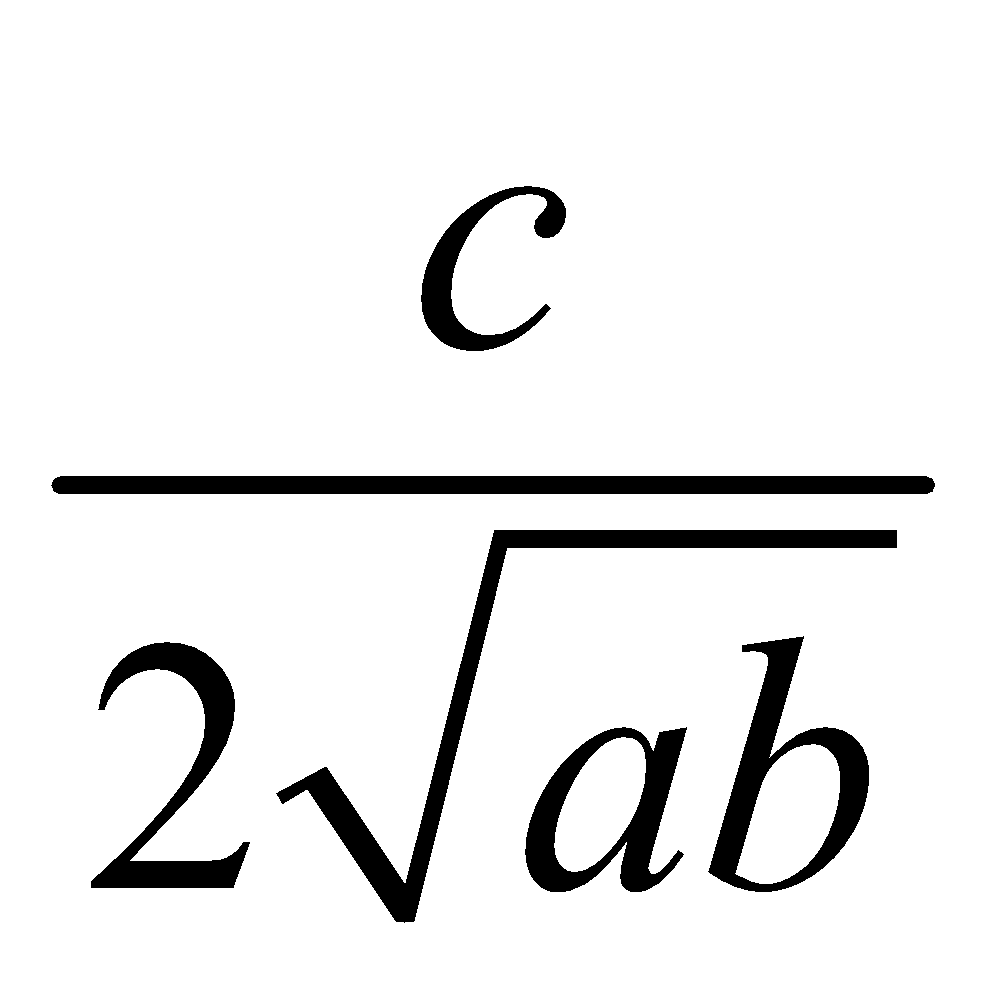
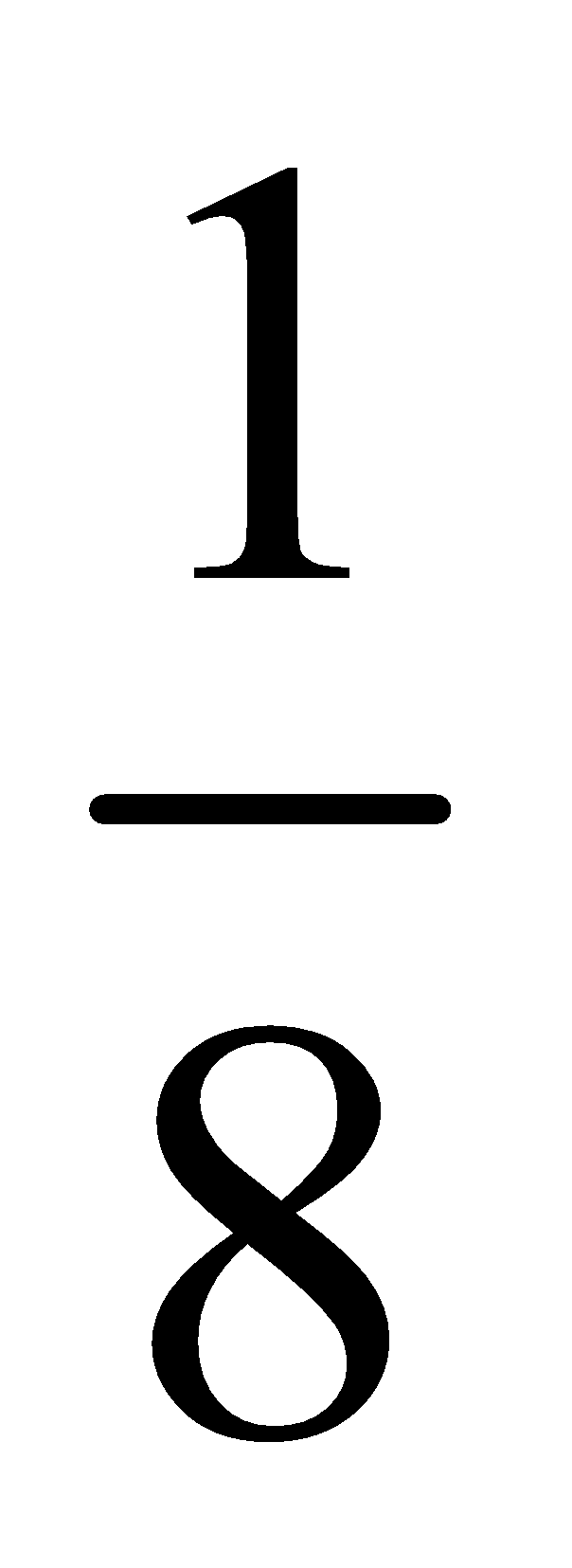
ABE (= 1v)  BE = AB. SinA1 = c. sin 0.5 điểm

ACF (= 1V)  CF = AC. SinA2 = b. sin 0.5 điểm

 BE + CF = (b + c) sin  a  sin   0.5 điểm

b>0; c>0 áp dụng bất đẳng thức Côsi: b + c    Sin 0.5 điểm

Tương tự ta cũng có: Sin ; Sin

 Sin. Sin. Sin  . . =  0.5 điểm

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*