

2021



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# Chapter 1

2020 8

3 30

30

“ ” “ ”

Alex Alex

Angela Alex



# Chapter 2

Alex            Alex  
3

- 3 (
- 1 ( )
- 15 ( )
- 1 ( )

“ ABC ”

ABC AB

postulate postulare , ( )  
common notion “ ”

Alex            Alex  
“ ”

Sur

Surface

C

\*            3D  
AB            A AB            B

- 1.
- 2.

# Chapter 3

Alex                  A BC                  BC A                  BC A                  " "

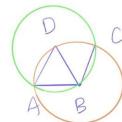
" "

( )

Alex

BC AB                  AB BC, AB BC AB BC

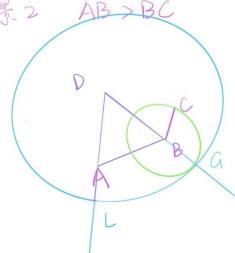
情景 1  $AB = BC$



巧合，概率极小

$$\begin{aligned} DA &= DB \quad \triangle \\ BD &= BC \quad \odot \\ AD &= BC \end{aligned}$$

情景 2  $AB > BC$

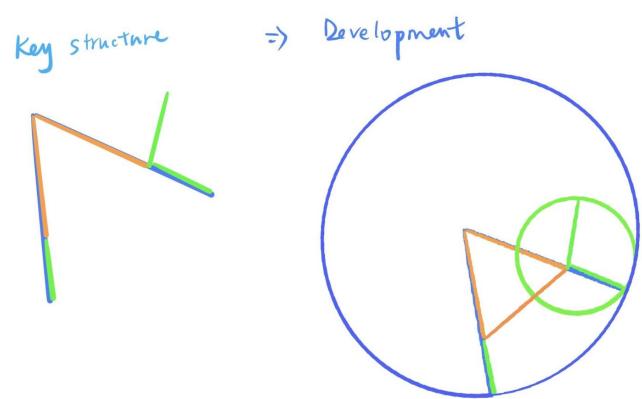


$$\begin{aligned} DA &= DB \quad \triangle \\ BC &= BG \quad \odot \\ DL &= DG \quad \odot \\ DL - DA &= DG - DB \\ AL &= BG (= BC) \end{aligned}$$

$$(AB=BC) \quad BC=BD \quad DB=DA \quad DA=BC \quad AB=BC$$

$$\begin{aligned} \mathbf{AB} > \mathbf{BC} \quad DL &= DG, \quad DA = DB, \quad AL(DL-DA) = BG(DG-DB) \quad BG = BC \\ AL &= BC \end{aligned}$$

$$\begin{aligned} \mathbf{AB} < \mathbf{BC} \quad DL &= DG, \quad DA = DB, \quad AL(DL-DA) = BG(DG-DB) \quad BG = BC \\ AL &= BC \end{aligned}$$





# Chapter 4

Alex

```

13 #include <stdlib.h>
14
15 int ftDefinesep(char s, char *charset)
16 {
17     int i;
18
19     i = 0;
20     while (charset[i])
21     {
22         if (s == charset[i])
23             return (1);
24         i++;
25     }
26     return (0);
27 }
28
29 int ftIndex(char *str, char *charset)
30 {
31     int i;
32     int index;
33
34     i = 0;
35     index = 0;
36     while (str[i])
37     {
38         while (str[i] && ftDefinesep(str[i], charset) == 1)
39             i++;
40         if (str[i] && ftDefinesep(str[i], charset) == 0)
41         {
42             index++;
43             while (str[i] && ftDefinesep(str[i], charset) == 0)
44                 i++;
45         }
46     }
47     return (index);
48 }
49
50 char *ftMalloc(char *str, char *charset)
51 {
52     char *size;
53     int i;
54
55     i = 0;
56     while (str[i] && ftDefinesep(str[i], charset) == 0)
57         i++;
58     size = (char*)malloc(sizeof(char) * (i + 1));
59     i = 0;
60     while (str[i] && ftDefinesep(str[i], charset) == 0)
61     {
62         size[i] = str[i];
63         i++;
64     }
65     size[i] = 0;
66     return (size);
67 }
68
69 char **ftSplit(char *str, char *charset)
70 {
71     char **array;
72     int i;
73     int k;
74
75     i = 0;
76     k = 0;
77     array = (char **)malloc(sizeof(char *) * (ftIndex(str, charset) + 1));
78     if (!array)
79         return (0);
80     while (str[k])
81     {
82         while (str[k] && ftDefinesep(str[k], charset) == 1)
83             k++;
84         if (str[k] && ftDefinesep(str[k], charset) == 0)
85         {
86             array[i] = ftMalloc(str + k, charset);
87             i++;
88             while (str[k] && ftDefinesep(str[k], charset) == 0)
89                 k++;
90         }
91     }
92     array[i] = NULL;
93     return (array);
94 }

```

C

include stdlib

stdlib

( malloc)

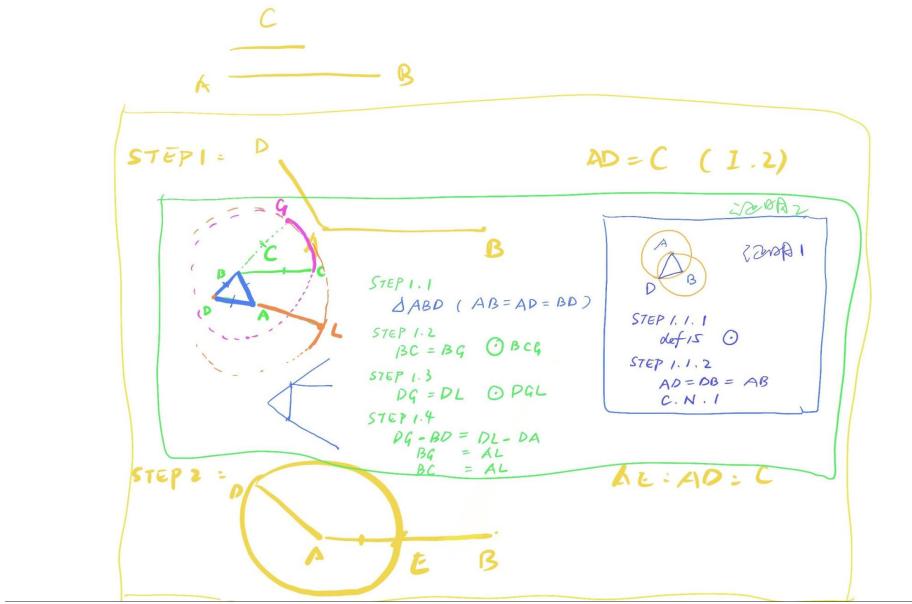
malloc

malloc

```

    " "
    char ft_split
    *ft_malloc  ftDefinesep  ft_split
                                ft_index  ftDefinesep,
                                "ft"      "ft"

```



Alex

1-3

" " "

```

    " "
    (
        )
)

```



# Chapter 5

Alex                    Alex            Alex  
Alex    4                    4    5  
Alex    Alex

Alex  
Alex    Alex  
Alex    Alex  
    enclosed; corresponding.

- enclosed: en = in ; closed
- corresponding , respond co
- let....( )I say( )

- /
- “a+b 1+1 ”



# Chapter 6

Alex

180

Alex

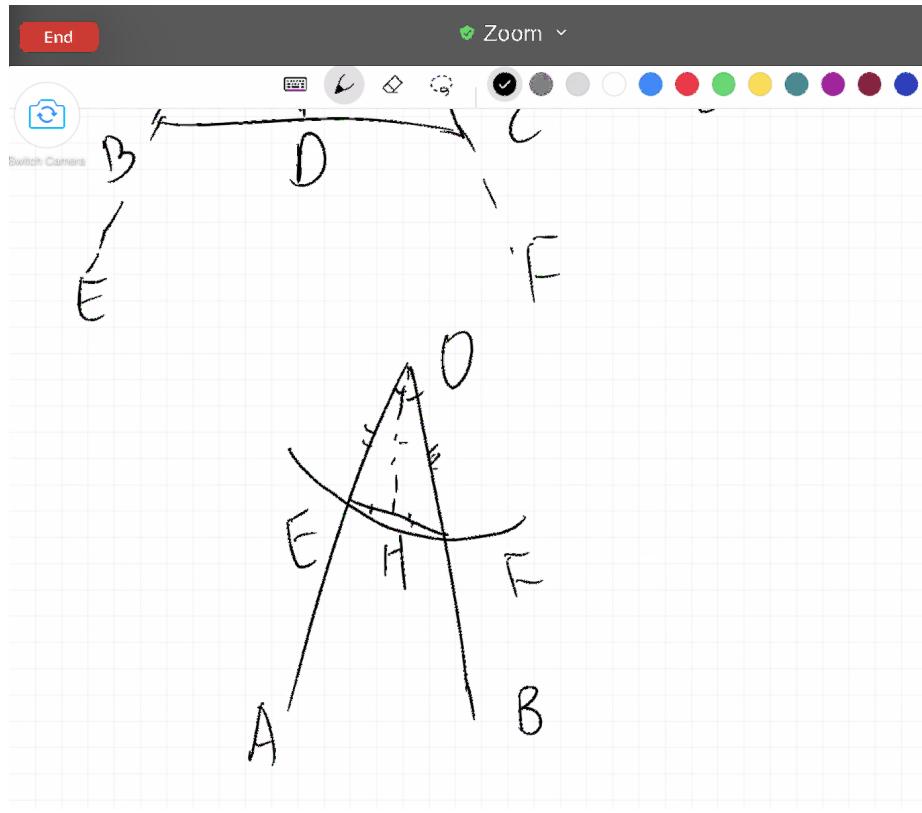
Alex

Alex

Alex

SAS( )

Alex



SSS( ) SSS

1. SAS( )
- 2.

Alex

Alex

SSA( ) Alex

Alex

Alex

( SAS )

Alex

• ( ) ( )  
 •  
 •

•      (      )



# Chapter 7

&

7.1

Alex

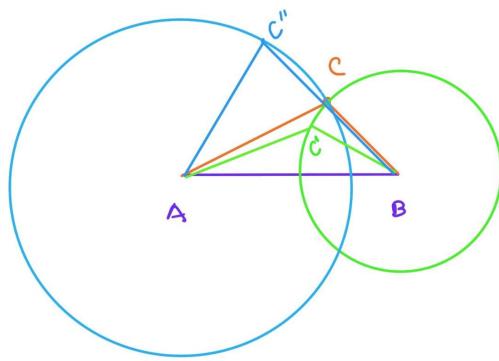
Alex

Alex

7.2

Alex

Alex



---

A    AC  
Alex

B    BC  
Alex

C

A

A    B AB  
Alex

AC    BC  
“ ”  
AB

•

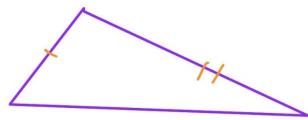
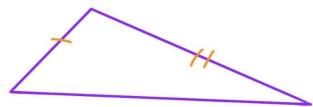
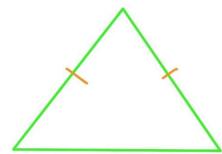
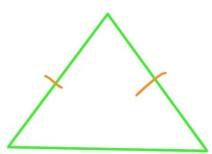
# Chapter 8

Alex

## 8.1

Alex

( / / / / )



Alex

## 8.2

Alex

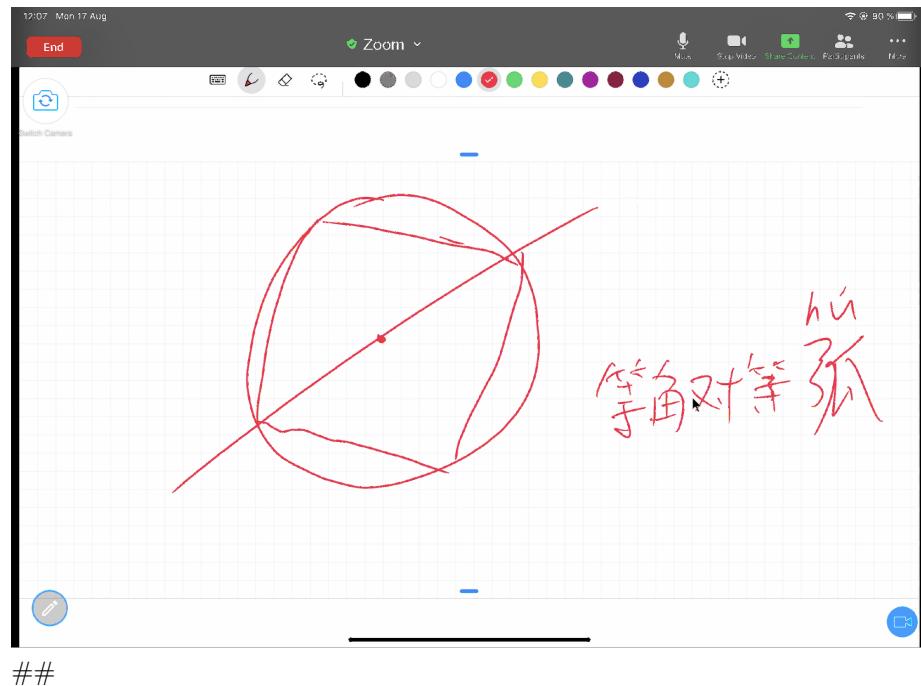
=>

Alex

Alex

180

Alex “ ”



8.3.

29

### 8.3

Alex

Alex

“ ”

Alex



# Chapter 9

## 9.1

- AB      C      -      C      AB

- AC      D CE CD; I.3 DE      FDE I.1 FC      FC      AB      C

-      DC CE CF      DC,CF      EC,CF      DF      FE      DCF ECF;

I.8      -                                        DCF,FCE

-      AB      C      CF AB      - Q.E.F.

•      (      )  
•      (    )  
•  
•  
•  
•

**9.2****9.3**

Alex                    180

180

Alex                 "     " "180 "              Alex     "     " "180 "

# Chapter 10

## 10.1

Alex

- 
- Alex        Alex        Alex
- ( ) Alex        Alex
- 

“ ”                  “ ”

“ ”

Alex

## 10.2

Alex                  “ ”                  Alex                  Alex

**10.3**

Alex

Alex

Alex

• if

# Chapter 11

## 11.1

Alex

$$\begin{aligned} & \Rightarrow \quad \Rightarrow \quad ( \quad 23: \quad ) \Rightarrow \quad ( \quad 19 \quad ) \quad \Rightarrow \\ & \Rightarrow \quad \Rightarrow \quad " \quad \Rightarrow \quad " \quad p \rightarrow q \quad p \rightarrow q ( \quad ) \quad " \quad \Rightarrow \quad " \\ & " \quad \Rightarrow \quad " \quad p \rightarrow q \quad q \rightarrow p \quad " \quad \Rightarrow \quad " \quad " \quad \Rightarrow \quad " \quad " \quad \Rightarrow \quad " \\ & \quad p \rightarrow q \quad p \rightarrow q \quad p \rightarrow q \\ & p \rightarrow q \quad p \quad q \\ & " \quad \Rightarrow \quad " \quad ( \quad ) \Rightarrow \quad ( \quad )" \end{aligned}$$

**11.2 &**

-> ->

“ -> ” “ -> ” → = ->

->

AC AB ABC ACB I.18 AC AB

AC AB AC AB BCA ABC BCA ABC AC AB

**11.3**

Alex

M.C.Escher





# Chapter 12

## 12.1

Alex ( )

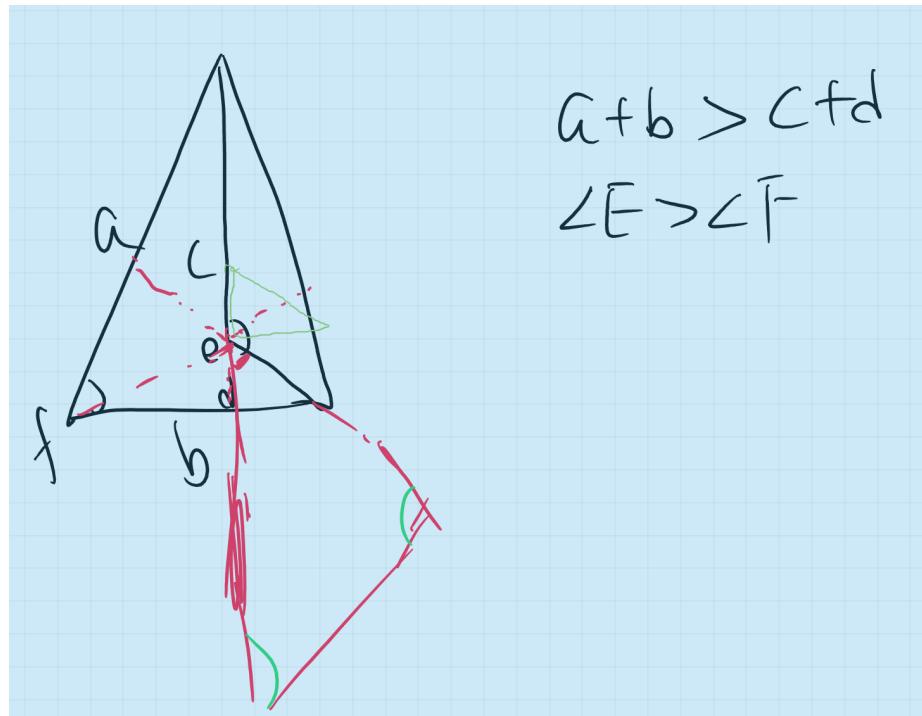
Alex

“ ”

- -

Alex

Alex ( )



Alex

/ /

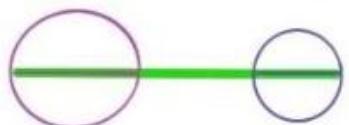
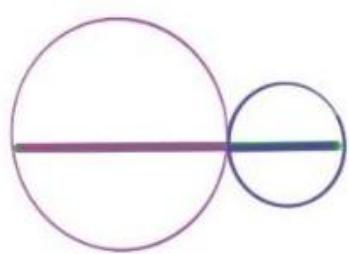
“ ”

Alex

• 5-10

# Chapter 13

## 13.1



**13.2**

Alex

Alex

•  
•  
•      /

**13.3**

•      /  
•

# Chapter 14

## 14.1

Alex

“ ”

( ) ( )

## 14.2

Alex “ ”

SSS SAS, ASA, AAS

Alex

ASA AAS

ASA AAS

“ ”

## 14.3

( )

**14.4**

•  
•

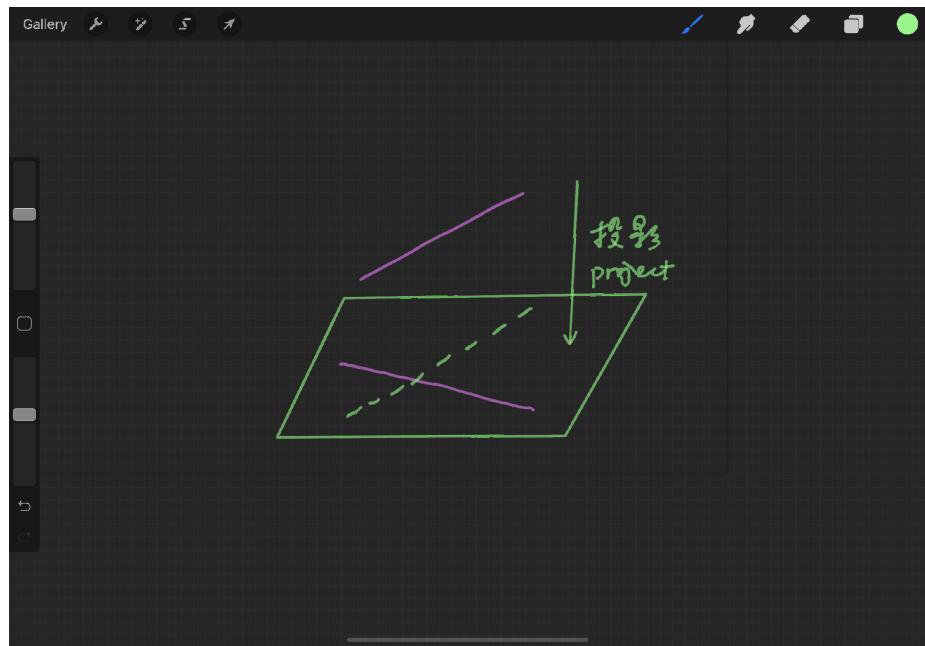
•

# **Chapter 15**

**15.1**

**15.2**

A B      A    B    C A    C      “                 “      (                 )



15.3

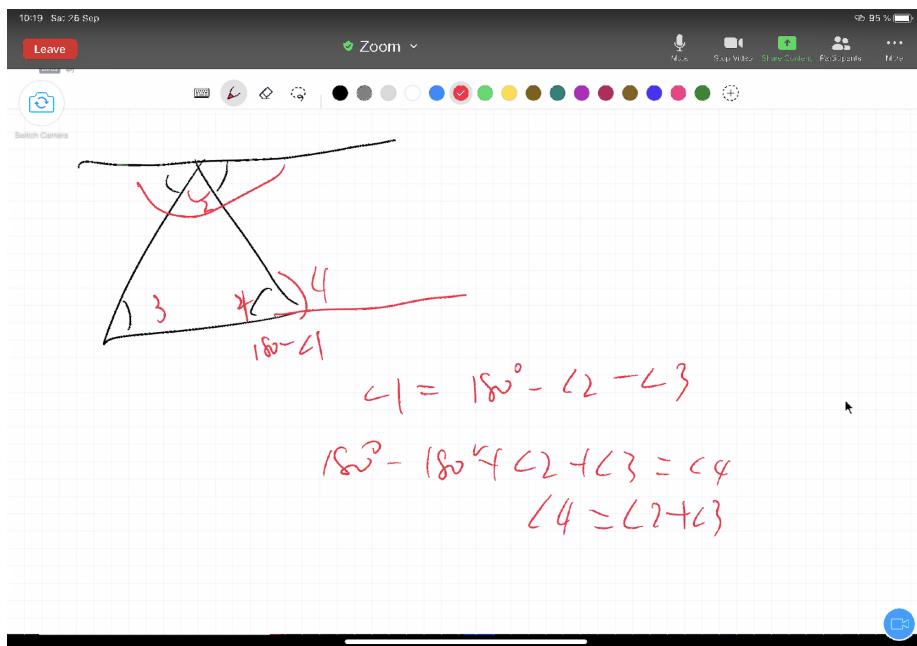
” ” ” ” ”

( )

15.4

( ) ( ) ( )

Alex





# Chapter 16

16.1 &

( )

“ ”

”area“ “ ”

( )

16.2 &



# **Chapter 17**

**17.1**

“ ”

**17.2**

**17.3**

( )

**17.4**

“ ” “ ”

**17.5**

(        )

“are

**17.6**

Alex (    ) (    )

# **Chapter 18**

**18.1**

( ) ( )

**18.2**

**18.3**

\*\*

\*\*



# Chapter 19

## 19.1

Alex

Alex

“ ” “ ”

## 19.2

—

( )

