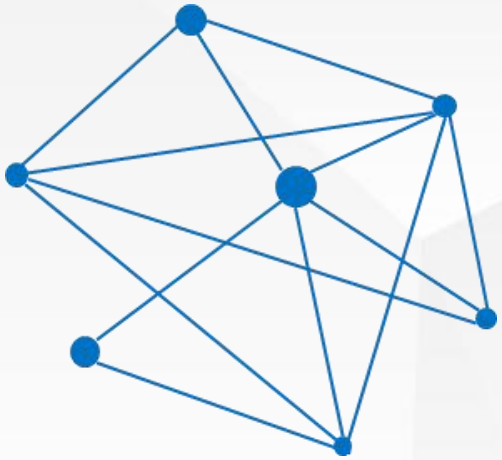

Presentation

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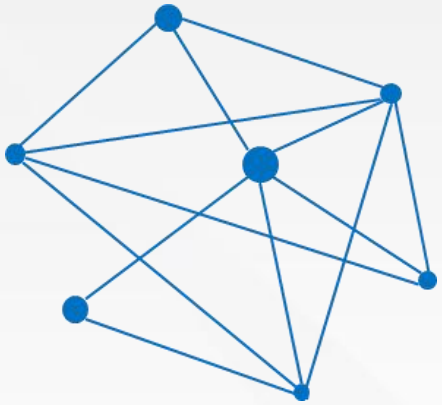
21 Hiter

2 Hitress



Keep Curious and Be Creative

English Presentation

Speaker: Chen_Py

Keep Curious

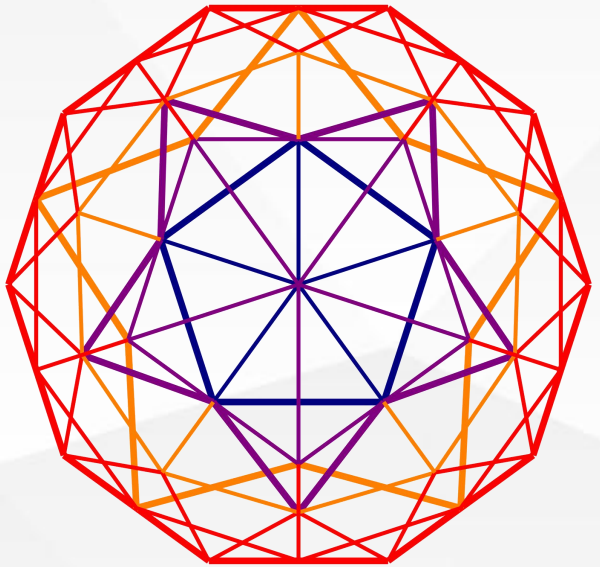
- **Maintain childhood curiosity**

Maintain childhood curiosity

Maintain childhood curiosity

How many points and triangles?

42 **80**



Keep Curious

- Maintain childhood curiosity
- Don't let your major limit your development

Ability

University

Score

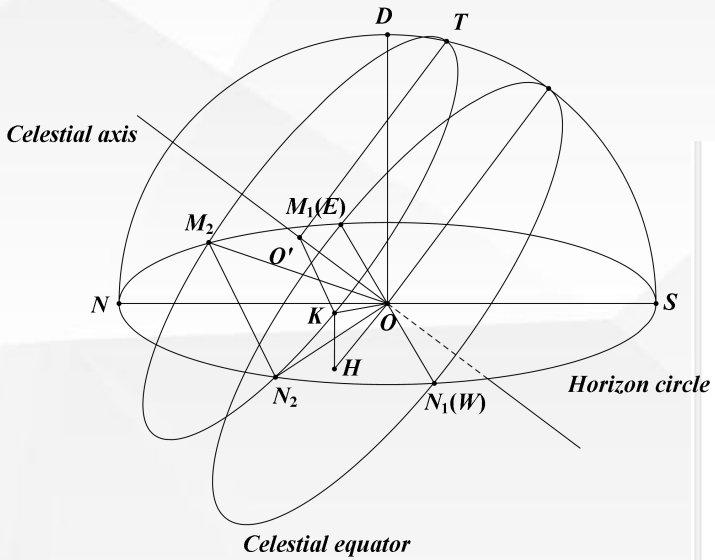
High School

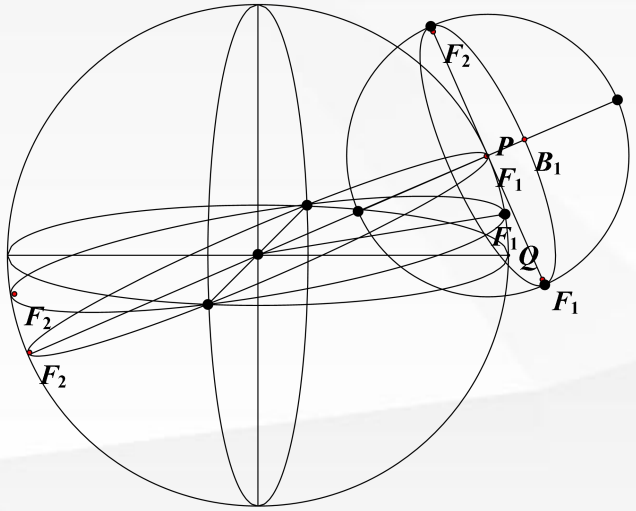
Keep Curious

- Maintain childhood curiosity
- Don't let your major limit your development
- Find questions in life and find answers in learning

The Autumnal Equinox

6:00





$$\frac{y^2}{R^2}+\frac{x^2}{(aR)^2}=1 \tag{1.2}$$

联立①、②式，得

$$\begin{cases} y^2=\dfrac{(a^2-b^2)R^2}{a^2-1} & (1.3)\\ x^2=bR-\dfrac{(a^2-b^2)R^2}{a^2-1} & (1.4)\end{cases}$$

设昼长角为 σ

$$\tan\angle\sigma=\frac{y}{x}=\sqrt{\frac{y^2}{x^2}}$$

③式除以④式得

$$\frac{y^2}{x^2}=\frac{\dfrac{(a^2-b^2)R^2}{a^2-1}}{bR-\dfrac{(a^2-b^2)R^2}{a^2-1}} \tag{1.5}$$

化简，得

$$\frac{y}{x}=\frac{1}{a}\sqrt{\frac{a^2-b^2}{b^2-1}} \tag{1.6}$$

$$\tan\sigma=\frac{1}{\sin\alpha}\sqrt{\frac{\sin^2\alpha-\cos^2\beta}{\cos^2\beta-1}} \tag{1.7}$$

则有

$$\sigma=\arctan\left(\frac{1}{\sin\alpha}\sqrt{\frac{\sin^2\alpha-\cos^2\beta}{\cos^2\beta-1}}\right) \tag{1.8}$$

设日长为 T，则

$$T=\frac{\text{昼长角}}{180^\circ}\times 12h=\frac{2\angle\sigma}{180^\circ}\times 12h=\frac{\angle\sigma}{90^\circ}\times 12h \tag{1.9}$$

$$T=\frac{\arctan\left(\dfrac{1}{\sin\alpha}\sqrt{\dfrac{\sin^2\alpha-\cos^2\beta}{\cos^2\beta-1}}\right)}{90^\circ}\times 12\text{h} \tag{1.10}$$

若直射点与观测点在同一半球，则上述方法计算的为夜长，当用 24h-T 求出日长。

因为无论在地球的哪个地方，正午时间均为 12:00。则可用正午时间减去昼长的一半计算理论日出时间。设理论日出时间为 t，则有：

```
82      return 0;
83  }
84
85  double  dayday(int a,int b)//计算偏离春分天数
86  {
87      int aa=3,bb=21;
88      int i;
89      for(i=0;a!=aa||b!=bb;i++)
90      {
91          if(b==yue[a])
92          {
93              if(a==12)a=1,b=1;
94              else a++,b=1;
95          }
96          else b++;
97      }
98      if(i>365/2)i=365-i;
99      return i;
100 }
101 double oumega(int i)//计算公转偏角
102 {
103     double jiao=fabs(90-jiaojiao*i);
104     double omega=90-jiao;
105     if((ba>3&&ba<9)||(ba==3&&ab>21)||(ba==9&&ab<23))omega=-omega;
106     return omega;
107 }
108 double chiwei(double omega)//计算赤纬
109 {
110     omega=turn(omega);
111     double huang=turn(23.433333333);
112     double chiwei=asin(sin(omega)*sin(huang));
113     return chiwei;
114 }
115 int main()//主函数
```

Interest is the best teacher

Be Creative

- **Feeling the sense of achievement while Creating**

How to be happy to creat

- Try to make something that you never thought you can make.
- Tell the creating progress to your partner.
  - Especially to a girl.

Be Creative

- **Feeling the sense of achievement while Creating**
- **PjBL: Learning while Creating**

Learning while Creating

- To new knowledge: Requirement is the second best teacher
- To old knowldege: Practice makes perfect
- Creating is a process of learning and practicing

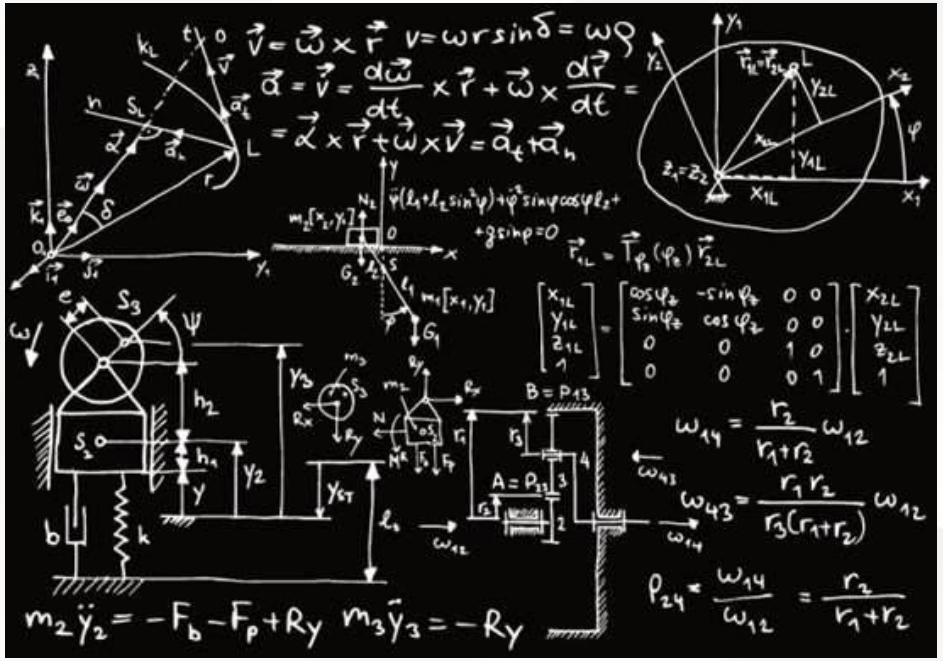
Be Creative

- Feeling the sense of achievement while Creating
- PjBL: Learning while Creating
- Take what you have learnt into use

- Difference between Engeneering and Science
- Why there is no Nobel Prize in math?

Research & Apply

Science & Engeneering



Science

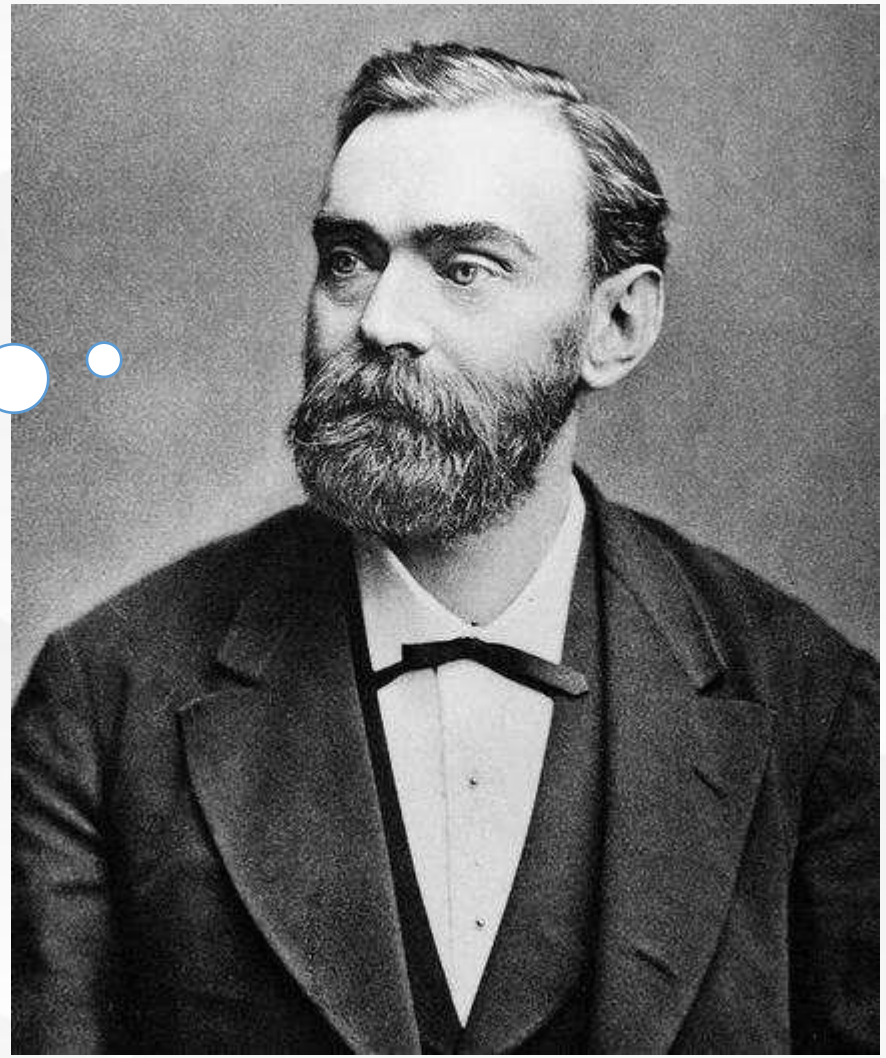
Research

Engeneering

Apply

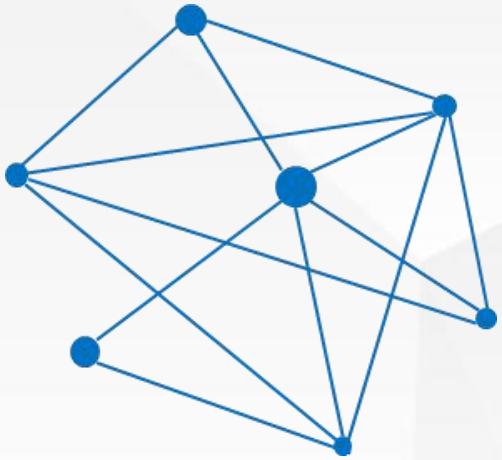
No Nobel Math Prize

People can't benefit directly from Math



Summary

- Be curious enough to find problems and be creative enough to save problems
- Broaden your horizon and not just stick to your major
- Interesting and Requirement. Practice makes perfect
- Feel the joy of applying knowledge
- Improve Happily, No Process Elimination



Thanks for Listening

Made by Chen_Py