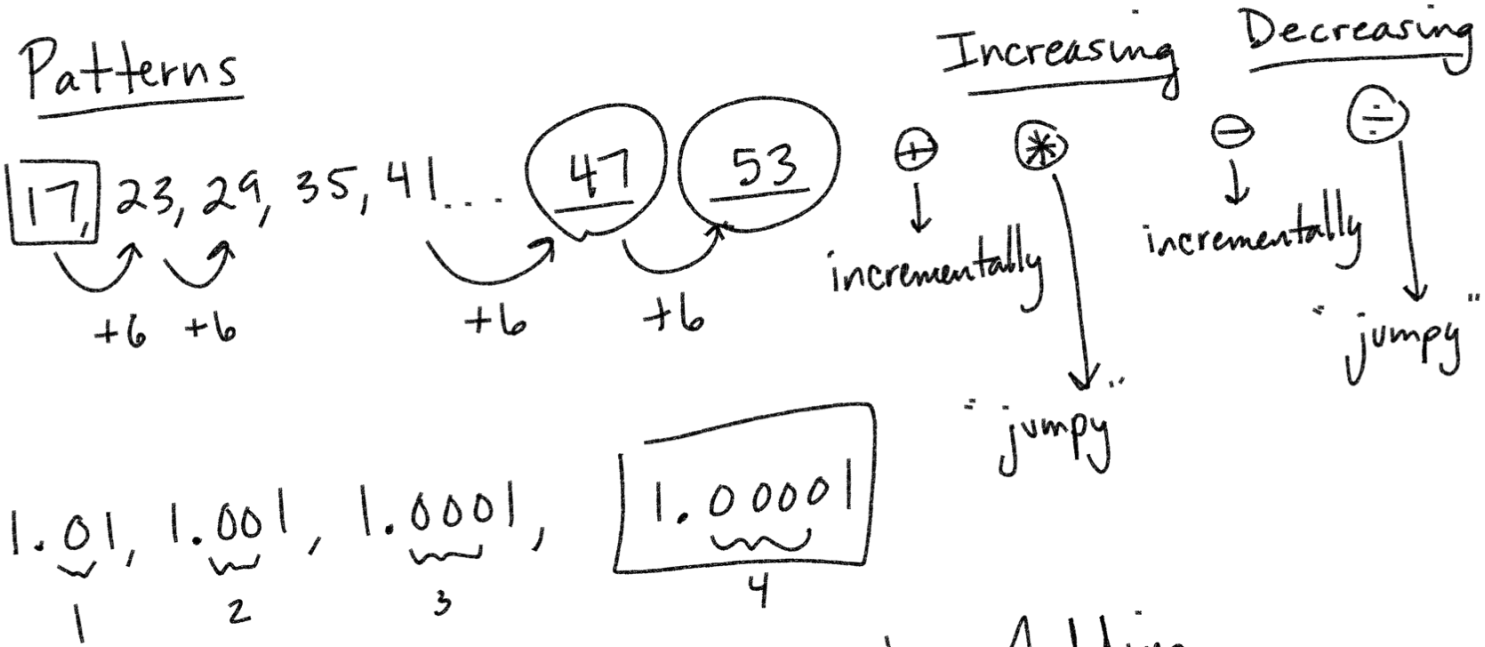
S-G Geometry 6/13 Session 1

Patterns



1.01, 1.001, 1.0001, 1.00001

1 2 3 4

Describe: Adding consecutive even numbers

12, 14, 18, 24, 32 ... 42 54

+2 +4 +6 +8 +10 +12

1.) 2, -4, 8, -16, 32 ... -64

*-2 *-2 *-2 *-2 *

Describe: Doubles, change sign or *-2

2.) 1, 2, 4, 7, 11, 16, ... 22

+1 +2 +3 +4 +5 +6

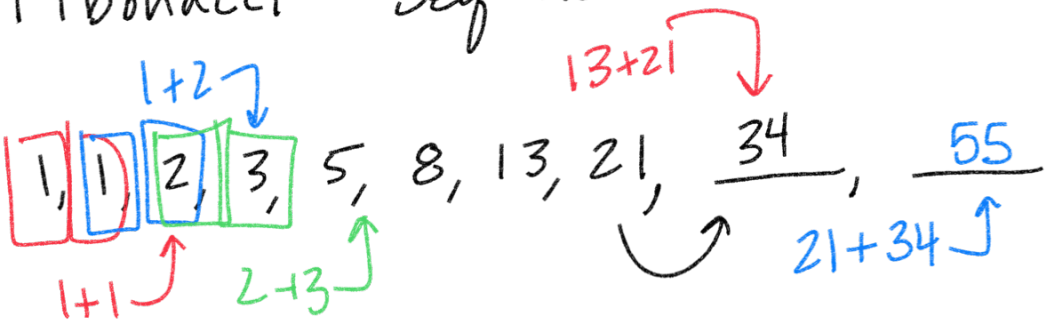
Describe: Add consecutive whole numbers

3.) 32, 48, 56, 60, 62 63

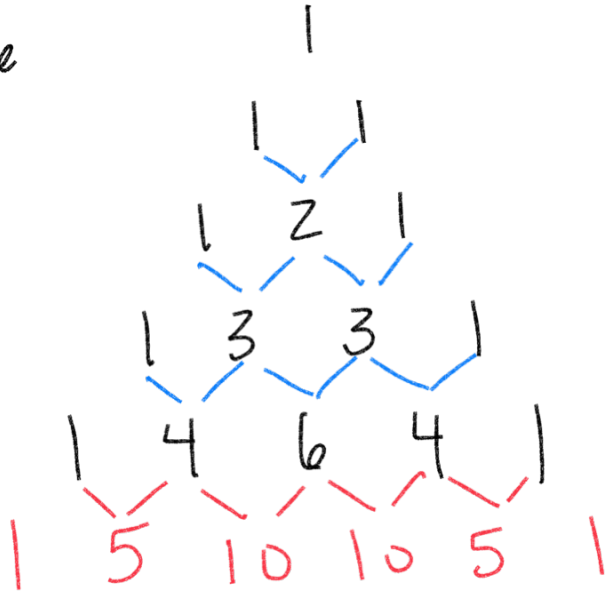
+16 +8 +4 +2 +1

Describe: Adding... interval is being halved each time.

Fibonacci Sequence



Pascal's Triangle



Challenge

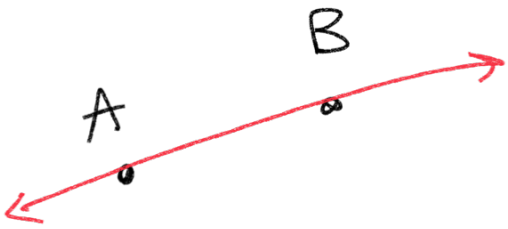
OA, UEA, EEA, UA, ___, ___, ___

1-2 Points, Lines, and Planes

Point • — 0 dimensions — singularity

Line - made up of 2 points

1 dimension

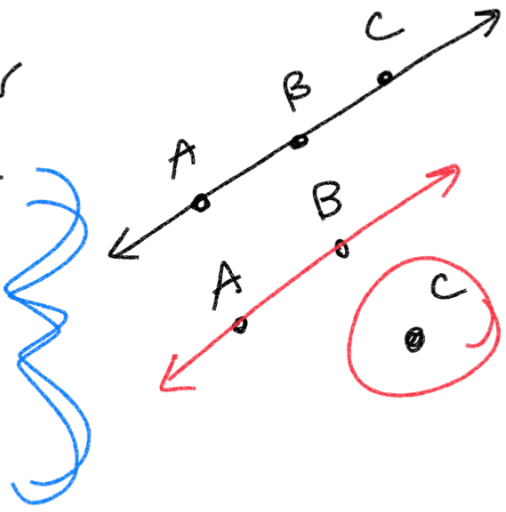


Plane — Made of either

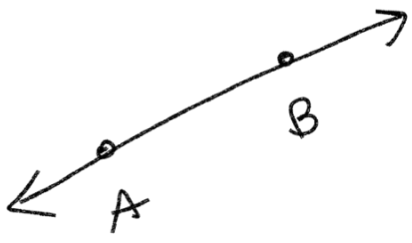
1.) 3 noncollinear points

or

2.) A line and one noncolllinear point

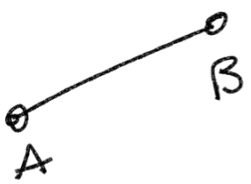


Line $\overleftrightarrow{AB}$



arrow means the line extends to infinity in both sides

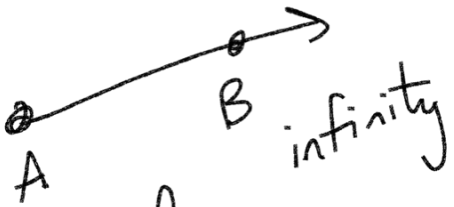
Segment $\overline{AB}$



terminal in both sides

Ray

$\overrightarrow{AB}$



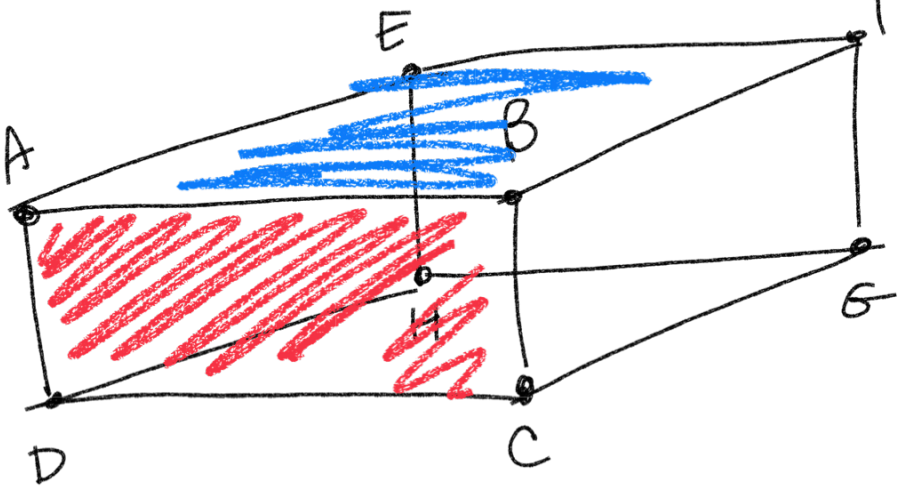
terminal

Plane

ABC

BCD

ADC



Plane

EAB

EFB

BAE

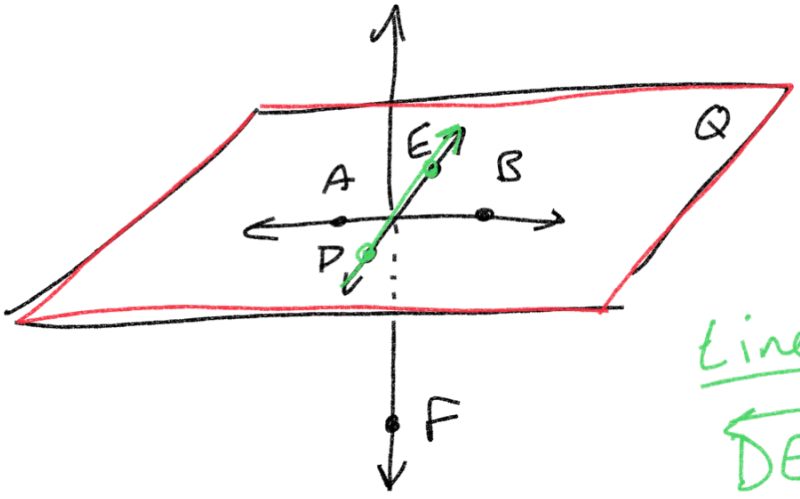
Plane Q

Plane

3 noncollinear points

or

A line and a noncollinear



Plane

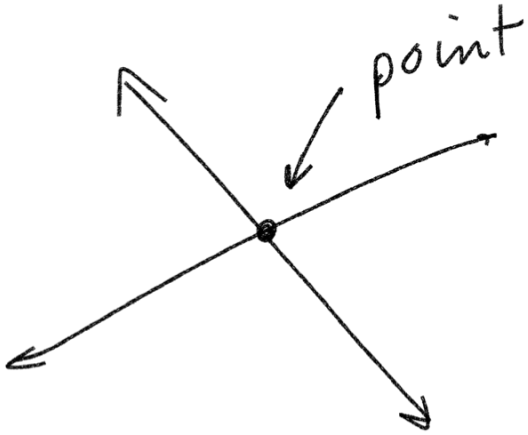
DAB

ADE

Line

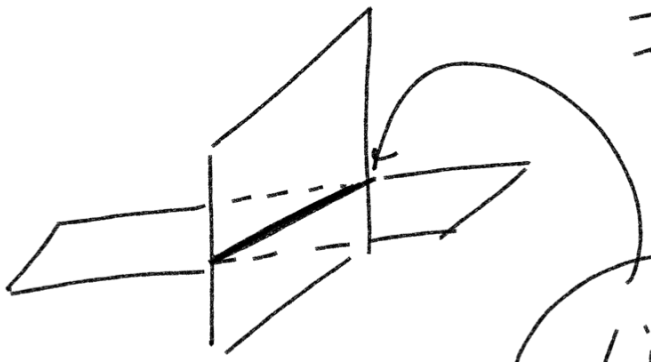
$\overleftrightarrow{DE}$

$\overleftrightarrow{ED}$



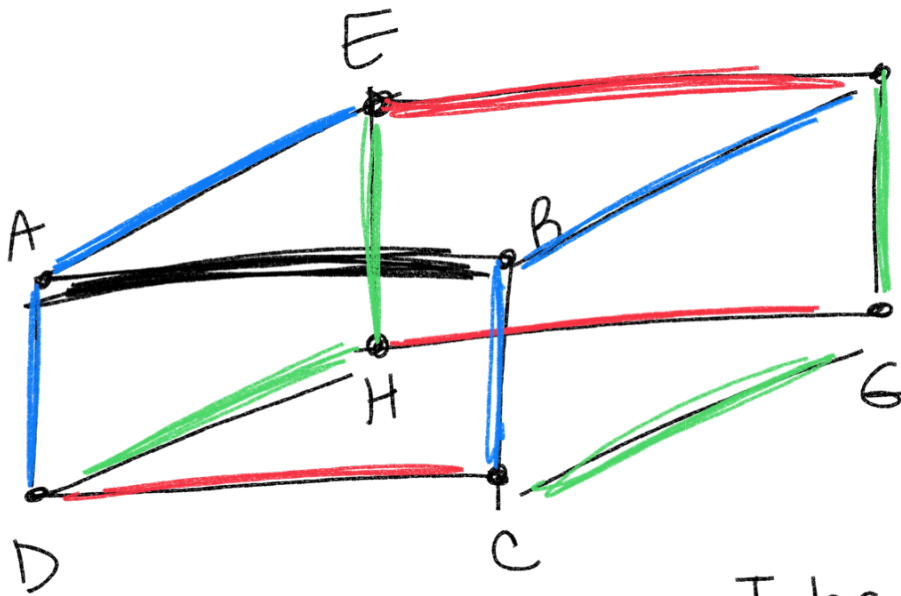
Intersection of 2 lines

point



Intersection of 2 planes

Line



Line segment AB

Parallel

$\overline{EF}$, $\overline{DC}$

$\overline{HG}$

Intersecting perpendicular

$\overline{AE}$, $\overline{BF}$, $\overline{AD}$, $\overline{BC}$

Parallel lines

- same slope
- exist on same plane
- no intersection

skew (never touch but not on same plane)

$\overline{FG}$, $\overline{CG}$, $\overline{DH}$, $\overline{EH}$