

Chapter 1 - An Introduction to Geometry

HW #1

- Read Ch 1
- Ch 1 Review Problems pp. 36-38 - due Friday
- Start working on Geometry badge on Khan Academy; make sure you've added me as a coach using code listed on your syllabus!

1.1

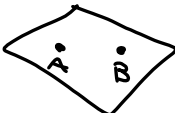
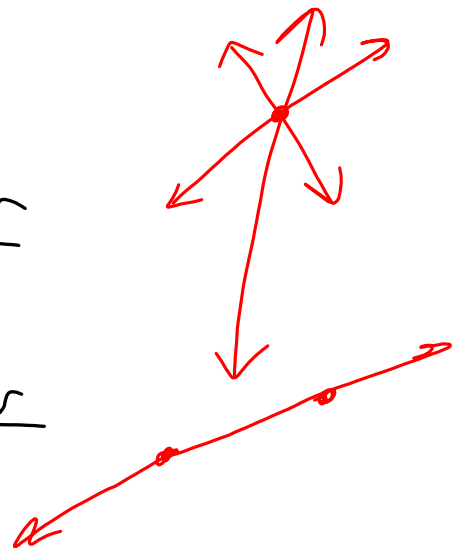
line segment $A \text{---} B$ \overline{AB}

line \longleftrightarrow

2 points determine a line
 \Rightarrow any 2 points in space are collinear

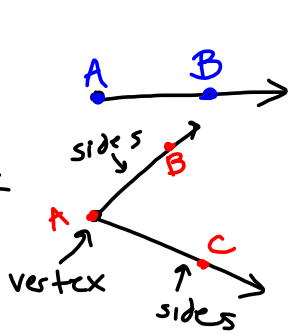
plane - flat surface extending infinitely

3 points define a plane
 \Rightarrow any 3 points in space are coplanar

1.2

ray
angle

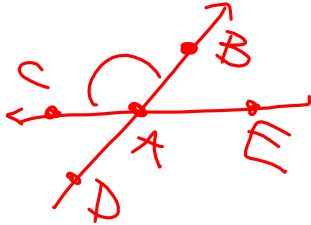
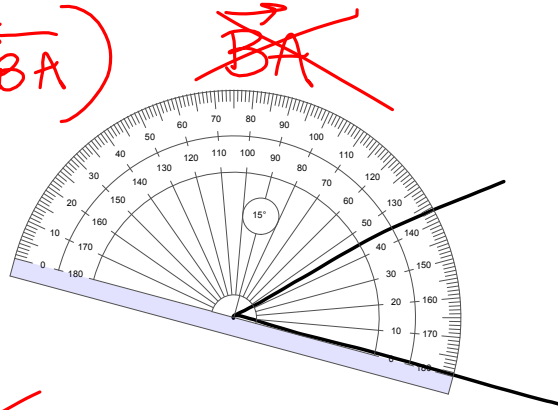


\vec{AB} (\overleftarrow{BA}) ~~\vec{BA}~~

$\angle BAC$
 $\angle CAB$

$\angle A$

~~\vec{AB}~~ ~~\vec{AC}~~

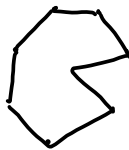


1.3

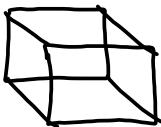
point is

- 0-dimensional

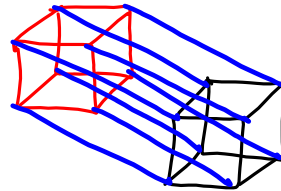
— line / line segment
1-dimensional



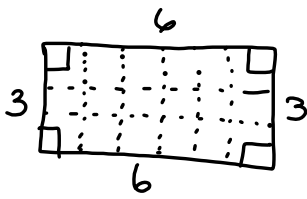
polygons are
2-dimensional



polyhedron/polyhedra
3-dimensional



perimeter, area, & volume



perimeter = sum of lengths of all the sides

$$3 + 6 + 3 + 6 = 18$$

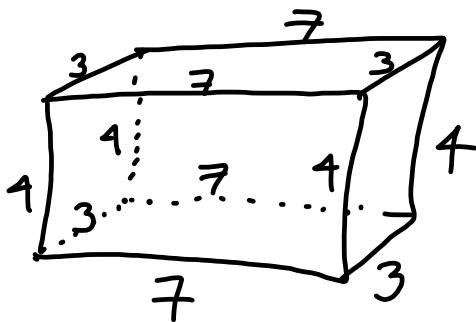
area = product of 2 perpendicular measurements (bh)(lw)

$$6 \cdot 3 = 18$$



outside perimeter = 10

$$\text{area} = 4$$



Volume = product of 3 linear dimensions

$$3 \cdot 4 \cdot 7 = 84$$

Surface Area = sum of areas of surfaces

$$2(3 \cdot 7) + 2(4 \cdot 7) + 2(3 \cdot 4)$$

$$42 + 56 + 24 = \boxed{122}$$