HGEO

Lesson Title 1.1 Points, Lines, & Planes Date _____

Vocabulary

undefined terms: cannot use other figures; point, line, plane

Point: A, capital letter, •, names a location, and has no size.

line: line m, $\overleftrightarrow{AB}$, $\overleftrightarrow{BA}$, straight path, no thickness, extends forever

plane: plane R, plane ABC, straight path, no thickness, extends forever.

collinear: points on the same line

Coplanar: points on the same plane

segment: $\overline{AB}$, $\overline{BA}$, part of a line, has a measure, endpoint to endpoint and all points between

endpoint: point at the end of a ray, or segment.

ray: part of a line, $\overrightarrow{AB}$ or $\overleftarrow{BA}$, that starts at one endpoint & extends forever in one direction.

opposite rays: 2 rays common endpoint that form a line.

Postulates/Theorems

postulate: a statement that is accepted as truth without proof.

- Any 2 points ⇒ one line.
- Any 3 noncollinear points ⇒ Exactly one plane contains them.
- IF 2 points lie in a plane ⇒ the points lie in the plane.
- IF 2 ↔ intersect ⇒ they intersect in one point.
- IF 2 planes intersect ⇒ they intersect in exactly one line.

Examples

Task 1

A, B, C, D

$\overleftrightarrow{AE}$, $\overleftrightarrow{BE}$, $\overleftrightarrow{CE}$

Task 2

plane R or plane ABC

Task 3

- $\overrightarrow{CB}$ $\overrightarrow{CD}$
- B
- $\overleftrightarrow{BD}$
- plane T

Task 4

- not possible
- Oshkosh, Fond du Lac, Milwaukee
- Yes or No, depends on justification

Still need help with: