Identify Points, Lines, and Planes

Warm-up: Coach DuBose is planning strategies for a W-L football game. Look at the picture on the left below and try to identify which vocabulary word from the word bank to the right represents the players, the yard lines, and the field.
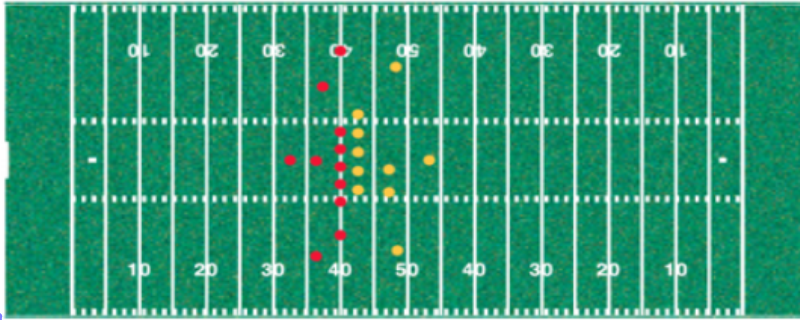
Word Bank

Plane

Line

Point

The players are represented by ___Point___ .

The yard lines are represented by ___Line___ .

The field is represented by ___plane___ .

Aug 7-2:29 PM

Welcome! Please get your ISN and have a seat!!

Please complete the warm up in your Google classroom!

Aug 9-2:18 PM

1

TOC 7-8 Points, Lines, and Planes
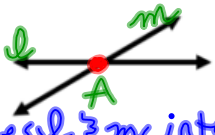
7	Points, Lines, and Planes	Points, Lines, and Planes	8
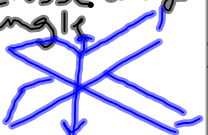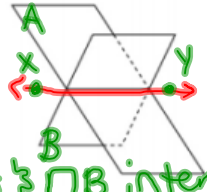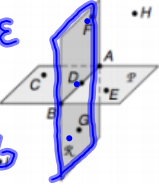
Aug 7-2:44 PM

WWK Pg 3

Term	Definition	Picture
Point	a location - has no size - named by a letter or by an ordered pair	•A or $(1,-4)$
Line	Straight path through 2 points that goes on forever. named by 2 points or by cursive letter.	$\overleftrightarrow{AB}$ line m A B m
Plane	flat 2D surface that extends forever. named with 3 points OR capital letter.	X •B •A •C ▱ABC OR ▱X

Aug 8-8:19 AM

PG 7-8Points, Lines, and Planes

LINES CAN BE	PLANES CAN BE	INTERSECTIONS	COLLINEAR
Parallel -same plane -never cross	**Parallel** -never cross	lines **intersect at one point** **lines ℓ & m intersect at poin A.**	on the same line SR PQ UPV TSR
Intersecting -same plane -cross @ any angle	**Intersecting** -cross @ any angle	planes **intersect at a line**	COPLANAR on the same plane
Perpendicular -Same plane -cross @ 90°	**Perpendicular** -meet @ 90°	☐A & ☐B intersect at line XY	CDE FDG
Skew -different planes -never cross			

Aug 8-10:20 AM

Give a REAL WORLD example of each of the following:
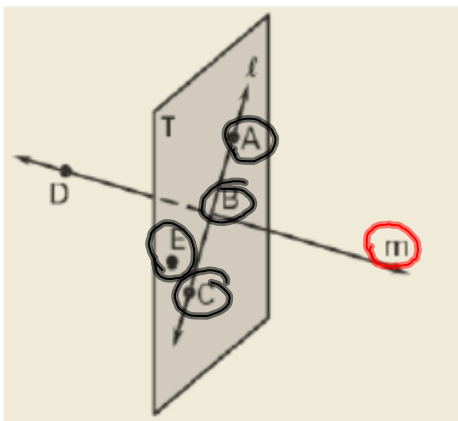
Point-

Line-

Plane-

Parallel Lines-

Parallel Planes-

Aug 14-8:52 AM

PG 8 Points, Lines, and Planes

Example 1: Use the picture below to answer the questions to the right.

a. Give two other names for $\overleftrightarrow{BD}$.

line m $\overleftrightarrow{DB}$

b. Give another name for plane T.

▢ ABE   ✳ 3 noncollinear
▢ BCE   points

c. Name three points that are collinear.

A B C

d. Name four points that are coplanar.

ABCE

Aug 6-5:05 PM

ISN pg 7 Pg 4 Lesson Practice a-h

Identify each of the following from the diagram.

a. All of the lines. line x, line w, line y,
b. A pair of collinear points ✳ Any 2 points on the same
   AB   plane make a line
▢ S,R c. All of the planes.
d. Three coplanar points.
   DAB
e. Two coplanar lines. Line w Line x
f. A pair of noncoplanar lines. Line y and Line w

Use the diagram to answer each question.

g. What is the intersection of $\overleftrightarrow{JK}$ and $\overleftrightarrow{NM}$? P
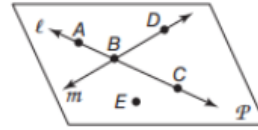h. What is the intersection of $\overleftrightarrow{JK}$ and plane W? K
   What is the intersection of $\overleftrightarrow{NP}$ and plane W? M

Aug 7-2:44 PM

4

Exercises

Refer to the figure.

1. Name a line that contains point A.

2. What is another name for line m?

3. Name a point not on $\overleftrightarrow{AC}$.

4. What is another name for line ℓ?

5. Name a point not on line ℓ or line m.

Draw and label a figure for each relationship.

6. $\overleftrightarrow{AB}$ is in plane Q.

7. $\overleftrightarrow{ST}$ intersects $\overleftrightarrow{AB}$ at P.

8. Point X is collinear with points A and P.

9. Point Y is not collinear with points T and P.

10. Line ℓ contains points X and Y.

Aug 11-9:45 AM