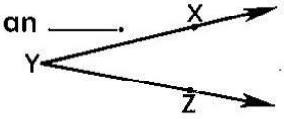
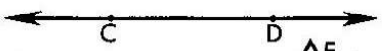
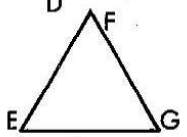
Across

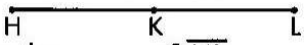
1. $\cong$
2. Two coplanar lines with no point in common are ____.
5. A 90 degree angle is a ____ angle.
8. An angle of 180 degrees is ____.
10. A statement that can be proved.
14. A ray or line that divides an angle into two equal parts is a ____.
16. Lines that form right angles when they meet are ____.
17. The endpoint of an angle is the ____.
20. Statement accepted without proof.
21. $\overrightarrow{AB}$ is a ____. 

22. Two angles whose measures total 180 degrees are ____.
23. Two lines that are not coplanar and do not intersect are ____.
24. An angle less than 90 degrees is ____.
26. Tool used to measure angles.
27. In 21 across, point A is an ____.
28. Figure XYZ is an ____. 

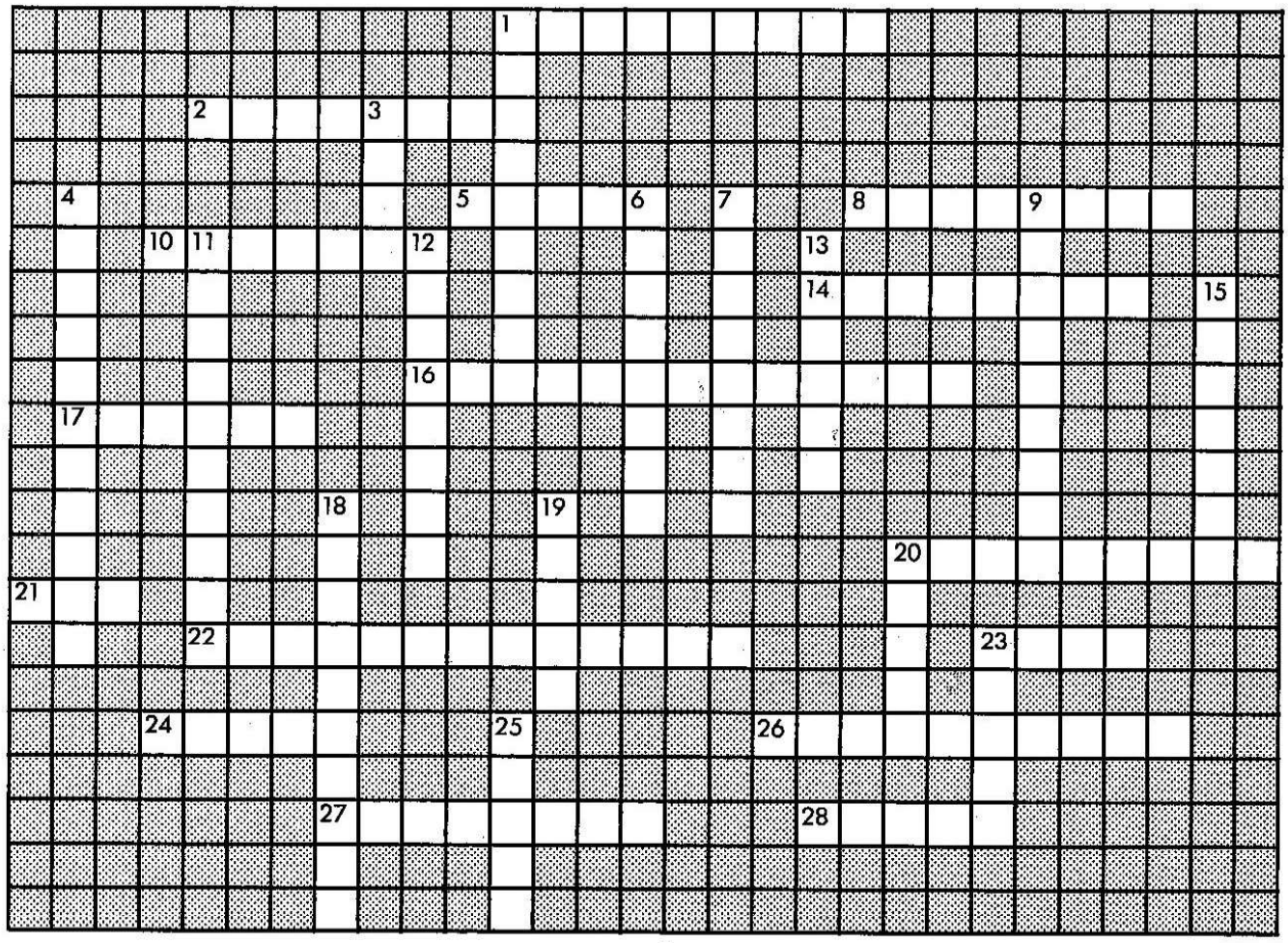
Down

1. Points that lie on the same line are ____.
3. $\overleftrightarrow{CD}$ is a ____. 

4. A line that cuts two or more parallel lines is a ____.
6. Figure EFG is a ____. 

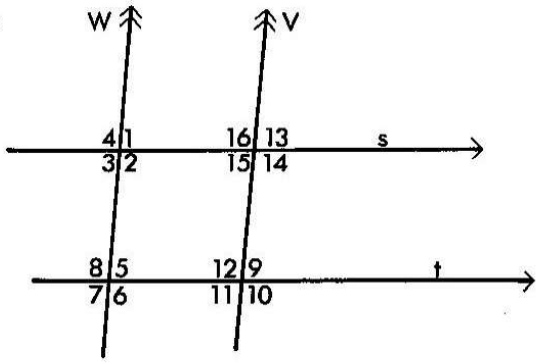
7. Two angles formed by intersecting lines are ____.
9. Lines that meet in one point are said to ____.
11. The "if" part of an "if . . . then" statement is the ____. 

12. If $\overline{HK} \cong \overline{KL}$ then K is the ____ of $\overline{HL}$.
13. An angle greater than 90 degrees is ____.
15. In 12 down $\overline{HL}$ is a line ____.
18. A 40 degree angle is the ____ of a 50 degree angle.
19. Two lines that lie in the same ____ are either parallel or intersect.
20. In 28 across X is a ____.
23. The set of all points is ____.
25. A ____ shows how a conclusion logically follows from other statements.

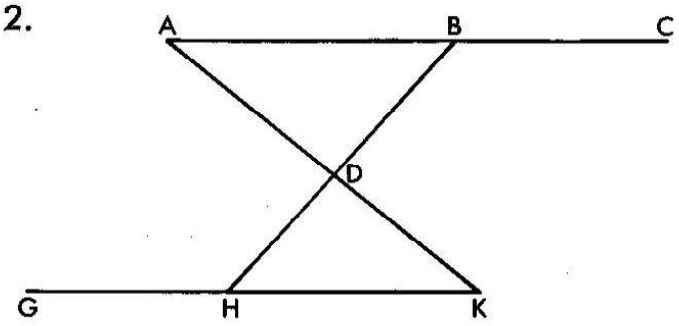


Use diagram 1 to answer questions 1-7 and diagram 2 to answer questions 8-12. To reveal what the great geometer Euclid is supposed to have said to Ptolemy I of Egypt, place the letters in the numbered spaces in the proper blanks below.

1.



2.



w and v are parallel lines. s and t are parallel lines.

1. Line w is a ____.
2. Angle 2 and angle 6 are ____ angles.
3. Angle 3 and angle 5 are ____ ____ angles.
4. Angle 14 and angle 9 are ____ ____ interior angles.
5. Angle 1 and angle 5 are ____.
6. Angle 3 and angle 8 are ____.
7. Complete this table.

Angle	Measure	Angle	Measure	Angle	Measure	Angle	Measure
1	85°	5	____	9	85°	13	____
2	____	6	____	10	____	14	____
3	____	7	____	11	____	15	____
4	____	8	____	12	____	16	____

8. If $\overline{AC} \parallel \overline{GK}$, then $\angle ABD = \angle$ ____.
9. If $\overline{AC} \parallel \overline{GK}$, then $\angle CBD$ and $\angle KHD$ are ____.
10. If $\angle DAB = 40°$ and $\angle DKH = 45°$, then $\overline{AC}$ and $\overline{GK}$ are not ____.
11. Angle ADH = angle BDK because they are ____ angles.
12. Assume $\overline{AC} \parallel \overline{GK}$. Complete this table.

Angle	Measure	Angle	Measure	Angle	Measure
ABD	50°	DHK	____	ADH	____
CBD	____	BDA	90°	HDK	____
DHG	____	DAB	____	DKH	____

Euclid's message to Ptolemy I was:

1	2	3	4	5		6	7		8	9		10	11	12	13	14		15	16	17	18

19	20		21	22	23	24	25	26	27	28