

A #7 p. 7-9 WE #1-18, 21-28

Key

WE (Written Exercises)

1.  $\overleftrightarrow{AB}$  is in plane R. [True]

2. S contains  $\overleftrightarrow{AB}$ . [True]

3. R and S contain D. [True]

4. D is on line h. [True]

5. h is in S. [True]

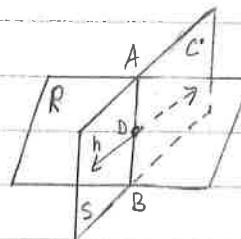
6. h is in R. [False] (h is in S.)

7. Plane R intersects plane S in  $\overleftrightarrow{AB}$ . [True]

8. Point C is in R and S. [False] (Point C is in Plane S.)

9. A, B, and C are collinear. [False] (A, B, and C are coplanar.)

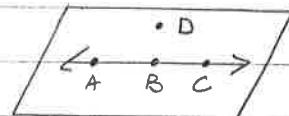
10. A, B, C, and D are coplanar. [True]



Exs. 1-10

11. Make a sketch showing 4 coplanar points such that 3, but not 4, of them are collinear.

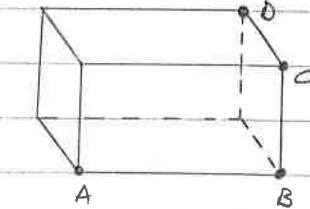
(A, B, C are collinear. D is not on  $\overleftrightarrow{AC}$ .)



12. Make a sketch showing four points that are not coplanar.

(A, B, and C are coplanar. B, C, and D are coplanar.)

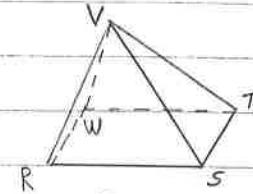
(A, B, C, and D are not coplanar.)



13. Name 5 planes. [VRW, VRS, VST, VTW, RST]

14. Of the 5 planes, are there any that do not intersect? [No]

15. Name 3 lines that intersect at point R. [RW, RV, RS]



Exs. 13-18

16. Name 2 planes that intersect in ST. [VST, PST]

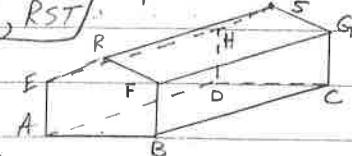
17. Name 3 planes that intersect at point S. [VRS, VST, PST]

18. Name a line and a plane that intersect in a point. [VS, RST]

\* There are many possible answers.

19. Name 2 planes that intersect in FG. [RFG and BFG]

20. Name 3 lines that intersect at point E. [EA, ER, EH]



21. Name 3 planes that intersect at point B. [ABF, ABC, FBC]

22. a. Are A, D, and C collinear? [No] b. Are points A, D, and C coplanar? [Yes]

23. a. Are points R, S, G and F coplanar? [Yes] b. Are points R, S, G and C coplanar? [No]

24. a. Name 2 planes that do not intersect. [ABF and DCG] b. [EAD and FBC]

25. Can two horizontal planes intersect? [No] (Horizontal planes are always parallel.)

26. a. Can two vertical planes intersect? [Yes] (Walls in a room)

b. Does a line in a vertical plane have to be vertical? [No]

