

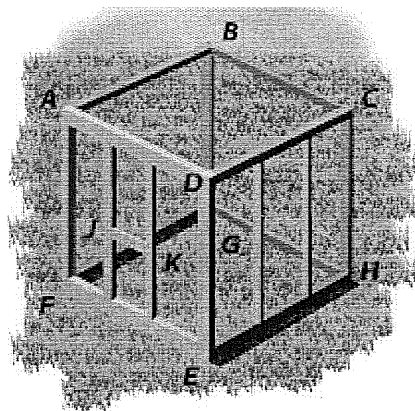
Lines and Transversals Homework:

Pg. 175: #4, 5 – 8

Pg. 176: 13 – 29 odd

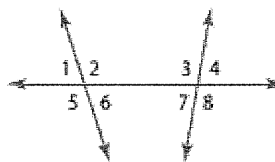
Pg. 177 #39 – 43 odd

4. **CONSTRUCTION** Use the diagram of the partially framed storage shed shown to identify each of the following.
- Name three pairs of parallel planes.
 - Name three segments parallel to \overline{DE} .
 - Name two segments parallel to \overline{FE} .
 - Name two pairs of skew segments.



Classify the relationship between each pair of angles as *alternate interior*, *alternate exterior*, *corresponding*, or *consecutive interior* angles.

- | | |
|------------------------------|------------------------------|
| 5. $\angle 1$ and $\angle 8$ | 6. $\angle 2$ and $\angle 4$ |
| 7. $\angle 3$ and $\angle 6$ | 8. $\angle 6$ and $\angle 7$ |

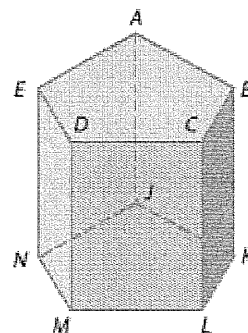


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Pg. 176: 13 – 29 odd

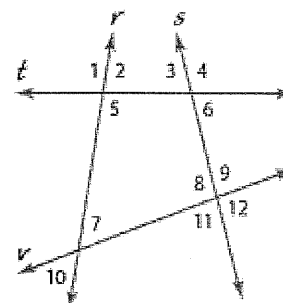
Refer to the figure to identify each of the following.

- all segments parallel to \overline{DM}
- a plane parallel to plane ACD
- a segment skew to \overline{BC}
- all planes intersecting plane EDM
- all segments skew to \overline{AE}
- a segment parallel to \overline{EN}
- a segment parallel to \overline{AB} through point J
- a segment skew to \overline{CL} through point E



3. **CCSS PRECISION** Identify the transversal connecting each pair of angles. Then classify the relationship between each pair of angles as *alternate interior*, *alternate exterior*, *corresponding*, or *consecutive interior* angles.

- | | |
|--------------------------------|---------------------------------|
| 21. $\angle 4$ and $\angle 9$ | 22. $\angle 5$ and $\angle 7$ |
| 23. $\angle 3$ and $\angle 5$ | 24. $\angle 10$ and $\angle 11$ |
| 25. $\angle 1$ and $\angle 6$ | 26. $\angle 6$ and $\angle 8$ |
| 27. $\angle 2$ and $\angle 3$ | 28. $\angle 9$ and $\angle 10$ |
| 29. $\angle 4$ and $\angle 11$ | 30. $\angle 7$ and $\angle 11$ |



Describe the relationship between each pair of segments as *parallel*, *skew*, or *intersecting*.

38. \overline{FG} and \overline{BC}

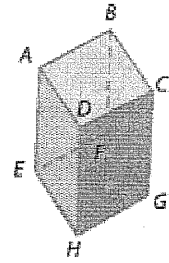
40. \overline{DH} and \overline{HG}

42. \overline{EF} and \overline{BC}

39. \overline{AB} and \overline{CG}

41. \overline{DH} and \overline{BF}

43. \overline{CD} and \overline{AD}



Lines and Transversals Homework SOLUTIONS

Pg. 175: #4, 5 – 8

Pg. 176: 13 – 29 odd

Pg. 177 #39 – 43 odd

following.

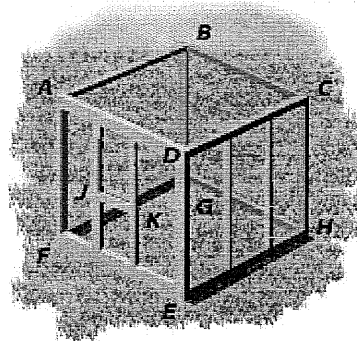
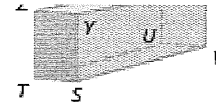
4a. plane $ABCD \parallel$ plane $FGHE$; plane $ADEF \parallel$ plane $BCHG$; plane $DCHE \parallel$ plane $ABGF$

4b. \overline{CH} , \overline{BG} , \overline{AF}

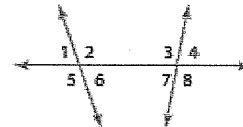
4c. Sample answer: \overline{AD} and \overline{BC}

4d. Sample answer: \overline{JK} and \overline{BG} ; \overline{JK} and \overline{CH}
Example 2

- a plane parallel to plane $ZWX \ TUV$
- a segment skew to \overline{TS} that contains point $W \ \overline{WZ}, \ \overline{WU}$
- all segments parallel to $\overline{SV} \ \overline{YX}, \ \overline{TU}, \ \overline{ZW}$
- CONSTRUCTION Use the diagram of the partially framed storage shed shown to identify each of the following.
 - Name three pairs of parallel planes.
 - Name three segments parallel to \overline{DE} .
 - Name two segments parallel to \overline{FE} .
 - Name two pairs of skew segments.



Classify the relationship between each pair of angles as *alternate interior*, *alternate exterior*, *corresponding*, or *consecutive interior* angles.

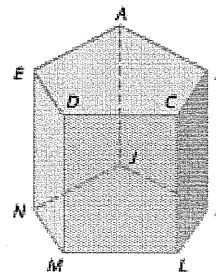


- alternate interior 5. $\angle 1$ and $\angle 8$ alternate exterior 6. $\angle 2$ and $\angle 4$ corresponding
interior 7. $\angle 3$ and $\angle 6$ — 8. $\angle 6$ and $\angle 7$ consecutive interior



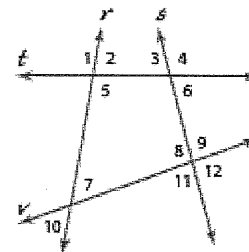
Refer to the figure to identify each of the following.

- all segments parallel to $\overline{DM} \ \overline{CL}, \ \overline{EN}, \ \overline{BK}, \ \overline{AJ}$
- a plane parallel to plane $ACD \ JLM$
- 15 a segment skew to $\overline{BC} \ \overline{EN}, \ \overline{AJ}, \ \overline{DM}, \ \overline{NM}, \ \overline{NJ}, \ \overline{JK}$ or \overline{ML}
- all planes intersecting plane $EDM \ DCL, \ NML, \ AED, \ AEN$
- all segments skew to $\overline{AE} \ \overline{KL}, \ \overline{CL}, \ \overline{BK}, \ \overline{ML}, \ \overline{DM}, \ \overline{NM}, \ \overline{KJ}$
- a segment parallel to $\overline{EN} \ \overline{AJ}, \ \overline{BK}, \ \overline{CL},$ or \overline{DM}
- a segment parallel to \overline{AE} through point $J \ \overline{JK}$
- a segment skew to \overline{CL} through point $E \ \overline{AE}, \ \overline{ED}$



3. **CPSS** PRECISION Identify the transversal connecting each pair of angles. Then classify the relationship between each pair of angles as *alternate interior*, *alternate exterior*, *corresponding*, or *consecutive interior* angles. 21–30. See margin.

- | | |
|--------------------------------|---------------------------------|
| 21. $\angle 4$ and $\angle 9$ | 22. $\angle 5$ and $\angle 7$ |
| 23. $\angle 3$ and $\angle 5$ | 24. $\angle 10$ and $\angle 11$ |
| 25. $\angle 1$ and $\angle 6$ | 26. $\angle 6$ and $\angle 8$ |
| 27. $\angle 2$ and $\angle 3$ | 28. $\angle 9$ and $\angle 10$ |
| 29. $\angle 4$ and $\angle 11$ | 30. $\angle 7$ and $\angle 11$ |



Answers: 29. $\angle 4$ and $\angle 11$

- 21) corresponding 27) consecutive interior
23) alt. interior 29) alt. exterior
25) alt. exterior

► Describe the relationship between each pair of segments as *parallel*, *skew*, or *intersecting*.

38. \overline{FG} and \overline{BC} parallel

40. \overline{DH} and \overline{HG} intersecting

42. \overline{EF} and \overline{BC} skew

39. \overline{AB} and \overline{CG} skew

41. \overline{DH} and \overline{BF} parallel

43. \overline{CD} and \overline{AD} intersecting

