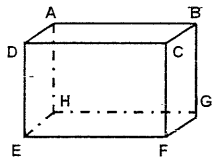
Lines & Transversals

Textbook pages #173 - #178
Chapter 3 - 1

1. Line AB & Line DC are _____.
2. Line AB & Line EF are _____.
3. Line BC & Line AH are _____.
4. Plane ABC & plane HGF are _____.

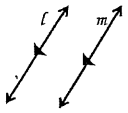


1. Parallel
2. Parallel
3. Skew
4. Parallel

Definitions

- Parallel lines (||) – lines that are coplanar & do not intersect

$\ell \parallel m$



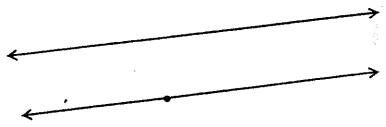
- Skew lines – lines that are not coplanar & do not intersect. Example: page 173

- Parallel planes – 2 planes that do not intersect. Example: the floor & the ceiling

A postulate or axiom is a statement that is accepted as true without proof. Basic ideas about points, lines, and planes can be stated as postulates.

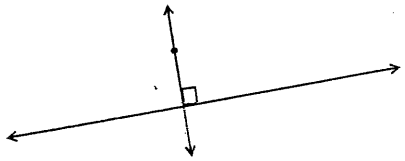
Postulate: || postulate

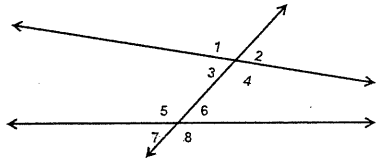
- If there is a line & a point not on the line, then there is exactly one line through the point || to the given line.



Postulate: ⊥ Postulate

- If there is a line & a point not on the line, then there is exactly one line through the point that is ⊥ to the given line.





Interior <s - <3, <4, <5, <6 (inside ℓ & m)

Exterior <s - <1, <2, <7, <8 (outside ℓ & m)

Alternate Interior <s - <3 & <6, <4 & <5 (alternate –opposite sides of the transversal)

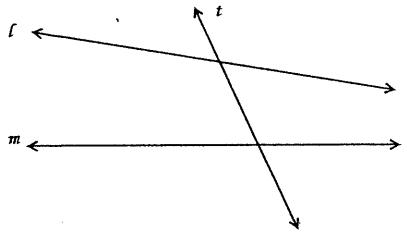
Alternate Exterior <s - <1 & <8, <2 & <7

Consecutive Interior <s - <3 & <5, <4 & <6 (consecutive – same side of transversal)

Corresponding <s - <1 & <5, <2 & <6, <3 & <7, <4 & <8 (same location)

Transversal

- A line that intersects 2 or more coplanar lines at different points.



Homework

Page 175 #s 4, 5 – 8
Page 176 #s 13 – 29 odd
Page 177 #s 39 – 43 odd