

Parallel

Skew

Perpen-
dicular

Parallel Lines \parallel

2 lines that do NOT intersect and are coplanar

Parallel Planes

2 planes that do not intersect

Skew Lines

2 lines that do not intersect and are not coplanar

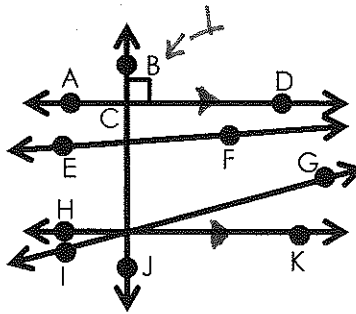
Perpendicular Lines \perp

2 lines that intersect at a right \angle

Perpendicular Planes

2 planes that intersect at a right \angle

Example 1:



Name a pair of parallel lines.

$\overleftrightarrow{AD} \parallel \overleftrightarrow{HK}$

Name a pair of perpendicular lines.

$\overleftrightarrow{JB} \perp \overleftrightarrow{AD}$

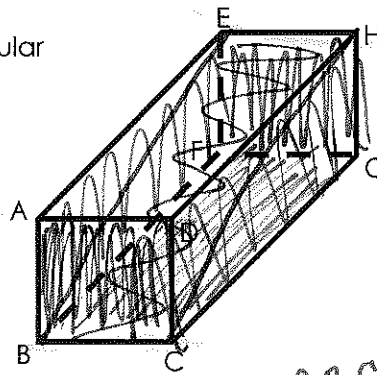
Is $\overleftrightarrow{EF} \parallel \overleftrightarrow{IG}$? No!

Is $\overleftrightarrow{AD} \parallel \overleftrightarrow{HK}$? Yes!

Is $\overleftrightarrow{AD} \perp \overleftrightarrow{JB}$? Yes

Is $\overleftrightarrow{HK} \perp \overleftrightarrow{EF}$? No

Example 2:



Line(s) parallel to \overleftrightarrow{BC} :

$\overleftrightarrow{AD}, \overleftrightarrow{FG}, \overleftrightarrow{EH}$

Line(s) perpendicular to \overleftrightarrow{EH} :

$\overleftrightarrow{HG}, \overleftrightarrow{EF}, \overleftrightarrow{DH}, \overleftrightarrow{AE}$

Line(s) skew to \overleftrightarrow{BF} and containing point C:

\overleftrightarrow{DC}

Plane(s) parallel to ABD:

EFG

Plane(s) perpendicular to BCF:

ABC, GHC, ABF, HEG,