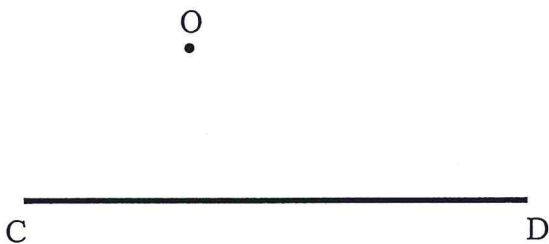Practice; Construct one line **parallel** and one line **perpendicular** to $\overline{AB}$ through point P.
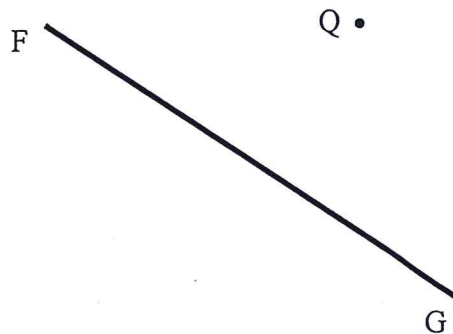
‖ = Parallel

⊥ = Perpendicular (90°)
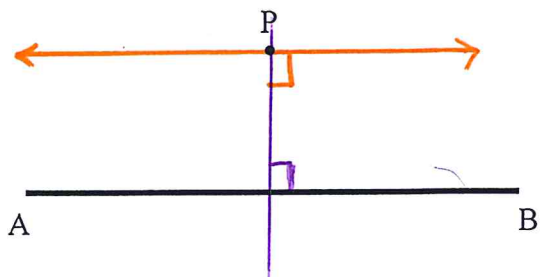
1) Construct one line **parallel** and one line **perpendicular** to $\overline{CD}$ through point O.

O

C   D

2) Construct one line **parallel** and one line **perpendicular** to $\overline{FG}$ through point Q

Q •

F

G

3) Make all three constructions

a) Construct a line **perpendicular** to $\overline{YZ}$ through X.
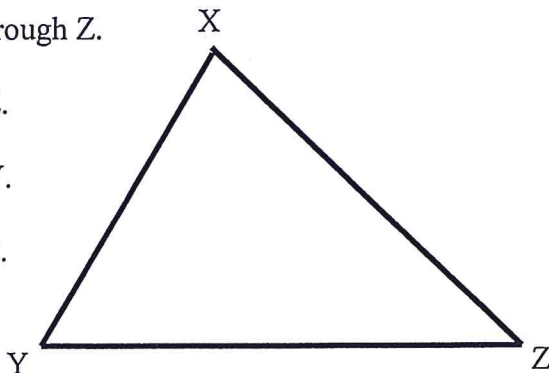
b) Construct a line **perpendicular** to $\overline{XZ}$ through Y.

c) Construct a line **perpendicular** to $\overline{XY}$ through Z.

d) Construct a line **parallel** to XY through Z.

e) Construct a line **parallel** to XZ through Y.

f) Construct a line **parallel** to YZ through X.

X

Y   Z

Construct lines a, b, c, d and e in the same plane. How are **a** and **e** related? Write a proof showing the relationship!

4.) a || b, b $\perp$ c, c $\perp$ d, d || e

5.) a $\perp$ b, b || c, c $\perp$ d, d || e