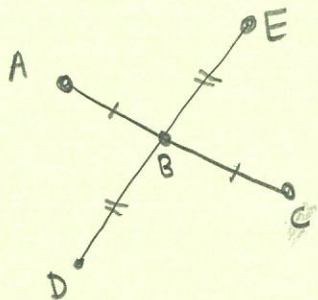


HW SOLUTIONS 8/9

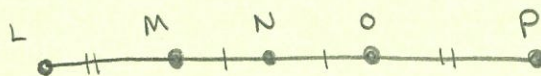
1.1 #19, 20, 27, 28, 32

19. **NOTE** MORE THAN ONE POSSIBLE ANSWER, HERE ARE 2

→ DRAW 2 SEGMENTS WITH THE SAME MIDPOINT, MARK CONGRUENT SEGMENTS.



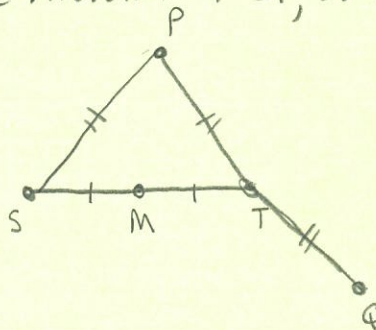
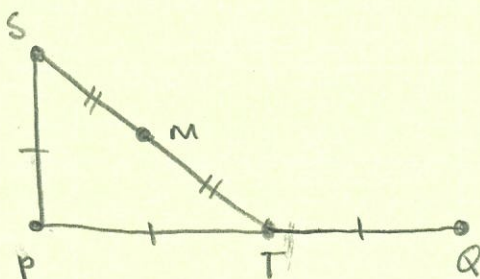
B is the midpoint
of \overline{AC} and \overline{DE}
 $\overline{AB} \cong \overline{BC}$ $\overline{DB} \cong \overline{BE}$



N is the midpoint of \overline{LP} and \overline{MO}
 $\overline{LN} \cong \overline{NP}$ $\overline{MN} \cong \overline{NO}$

20. **NOTE** ALSO MULTIPLE ANSWERS POSSIBLE

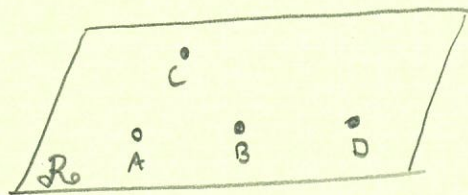
DRAW & MARK FIGURE WHERE M IS THE MIDPOINT OF \overline{ST} , $SP = TQ$, T IS THE MIDPOINT OF \overline{PQ} .



$SP = TQ$

* NOTE: Two segments are congruent if they have equal measures

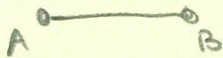
27. DRAW A PLANE W/ 4 COPLANAR POINTS (A, B, C, D) & EXACTLY 3 COLLINEAR POINTS (A, B, D)



* A, B, D ARE COLLINEAR EVEN IF THERE IS NO LINE SEGMENT CONNECTING THEM

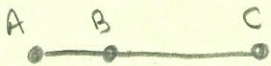
28. HOW MANY SEGMENTS CAN YOU NAME WITH 5 COLLINEAR POINTS?

w/ 2 POINTS



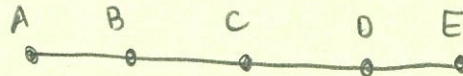
one segment \overline{AB}
(or \overline{BA} , it's still the same segment)

w/ 3 POINTS



\overline{AB} , \overline{BC} , \overline{AC}
3 segments

w/ 5 POINTS

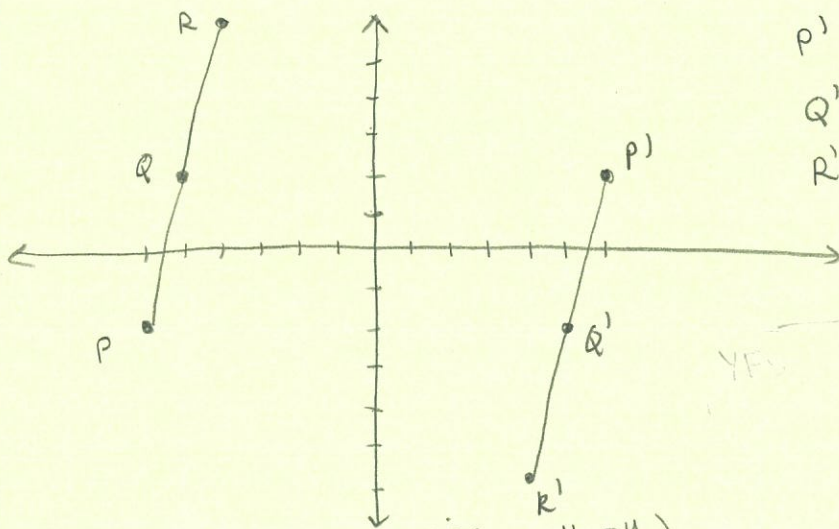


\overline{AB} , \overline{BC} , \overline{CD} , \overline{DE}
 \overline{AC} , \overline{BD} , \overline{CE}
 \overline{AD} , \overline{BE}
 \overline{AE}

10 segments

3a. GIVEN: $P(-6, -2)$, $Q(-5, 2)$, $R(-4, 6)$ ARE COLLINEAR

FIND: IF THE SIGNS OF COORDINATES ARE REVERSED, ARE THEY STILL COLLINEAR?



$P'(6, 2)$

$Q'(5, -2)$

$R'(4, -6)$

CHECK SLOPE $\left(\frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1} \right)$

for $P' \neq Q'$ $m = \frac{-2 - 2}{5 - 6} = \frac{-4}{-1} = 4$

for $P' \neq R'$ $m = \frac{-6 - 2}{4 - 6} = \frac{-8}{-2} = 4$

for $Q' \neq R'$ $m = \frac{-6 - (-2)}{4 - 5} = \frac{-4}{-1} = 4$

slopes are the same ✓
Therefore,

YES, THEY ARE STILL COLLINEAR