4. b - Constructions

1) Parallel Line Construction
2) Perpendicular Line Construction
3) Congruent Triangle Constructions
4) In Class Assignment

For retaking the Unit 4 Test...
- must be retaken by January 6
- must have a sheet of all corrected answers first
- review with me before retaking
- only before or after school (please let me know)
- if you earned below a 64%, you may retake and earn up to a 70%
- if you earned above a 64%, you may retake and earn up to an 80%

4. b - Ruler and Compass

Construction F: Parallel Line through a given Point
Need: Original line (line AB)
Point on new line (point C)

1) Create a line (m) that passes through C and intersects line AB
2) This creates angle 1
3) Copy angle 1 with C as the new vertex (Construction C)
4) The line/ray constructed as part of step 3 is parallel to line AB
4. b Ruler and Compass

Construction G: Perpendicular to a Line Through a Point not on the Line
Need: Line AB
Point C that is not on line AB

1) Use compass to SKETCH an arc with needle point at C that
   intersects line AB in two places. These two places will be
   labeled D and E
2) Set compass to a size greater than 1/2 of segment ED
3) Use set compass and needle point at D to SKETCH an arc on the
   side of the line opposite of point C
4) Repeat step 3 with the set compass but needle point at E
5) Label the place where these two arcs intersect as F
6) Use ruler to DRAW line CF
7) "Line CF is perpendicular to Line AB"

Construction H: Perpendicular to a Line Through a Point on the Line
Need: Line AB
Point C on line AB

1) Set compass to medium size. With needle point at C, SKETCH
   arcs on each side of C intersecting line AB at two points
2) Label those two points D and E
3) Set the compass to a larger size. With needle point at D,
   SKETCH an arc on one side of the line
4) Repeat step 3 with the set compass but needle point at E,
   on same side of line
5) Label the intersection of the two arcs F
6) Use ruler to DRAW line CF
7) "Line CF is perpendicular to Line AB"

Construction I: Congruent Triangle (by SAS)
Need: Original triangle (\triangle ABC)
Location for new triangle (Ray DZ)

1) Copy side AB of triangle as DE (Construction A)
2) Copy angle with vertex A angle to vertex of D (Construction C)
3) Along new side of new angle, copy side AC of triangle as DF
   (Construction A)
4) \triangle ABC \cong \triangle DEF
Assignment (Due at End of Class)

1) Carefully and Neatly Complete
   Constructions WS #1
   (turn in when done)

2) Carefully and Neatly Complete
   Constructions WS #2

3) Review Constructions for Quiz