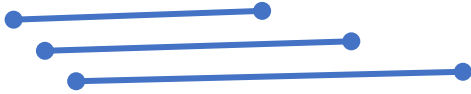


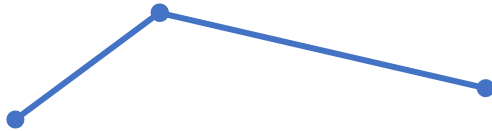
Math 5a, homework 18.

1. Segments $[AB]$ and $[CD]$ intersect at the point O . Point O is a midpoint of both segments, $[AB]$ and $[CD]$. What is the length of the segment $[BD]$ if the length of the segment $[AC]$ is 10 cm.? Draw the picture.

2. Construct a triangle with sides equal to the segments



3. Draw two segments so that the end of one segment is also the end of another segment (like on the picture below). Divide these two segments into two equal parts. What can you tell about the point of intersection of segmental bisectors (line, perpendicular to a segment and passing through its midpoint)?



4. Draw a circle. Find the center of your circle (it should coincide with the hole from the compass needle). (hint: use the previous problem).
5. Product of the ages of all Mary's brothers is 1664. The oldest brother is twice as old as the youngest brother. How many brothers does Mary have? How old they are?
6. Solve the equations:
 - a. $2x + 7 = 5x - 26$;
 - b. $0.4(y - 5) = 0.3(y + 1) + 1.2$;
 - c. $-0.6 - (-y) = -0.4$
7. Write without parenthesis and simplify the expressions:
 - a. $a - (b - c + d) - c + (d + b - a)$;
 - b. $(a - b - c) - (a - d) + d - (b - c)$;
 - c. $-(a - b + c) - (d + b - a + c) + d$;
 - d. $-(c - b - d) + a - (b + c) - (d - a)$.