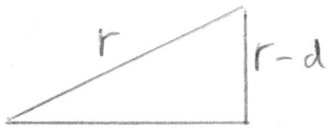
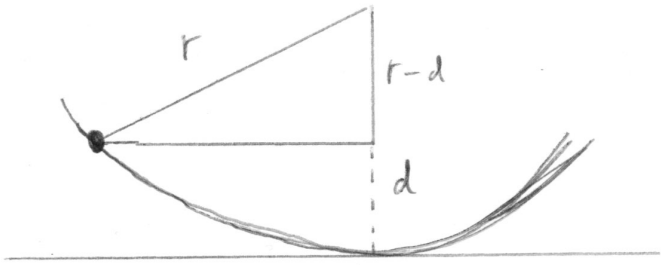
246. Circle of given radius r, tangent to given line, through point a distance d from the line

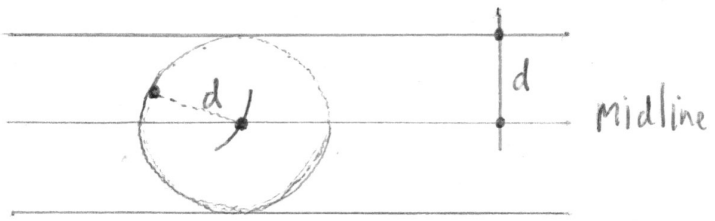
(1) Right triangle with given hypotenuse and leg



(2) Superimpose (vertex on given point, leg parallel to given line)



248. Circle tangent to 2 given parallel lines, passing through given point lying between the lines.

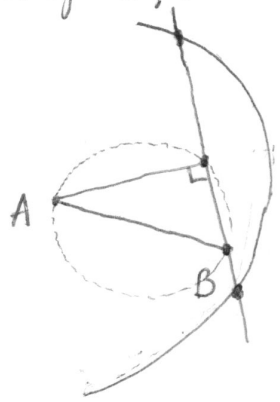


265. The geometric locus of feet of perpendiculars from A to lines through B is a circle with diameter AB:

The points P obtained this way are the right-angle vertex of a right triangle with hypotenuse AB. The median PM is always congruent to $\frac{1}{2}AB$, so P lies on the circle of radius $\frac{1}{2}AB$ centered at M.

266. The geometric locus of the midpoints of chords of a given disk passing through a point B inside the disk is a circle with diameter AB, where A is the center of the circle:

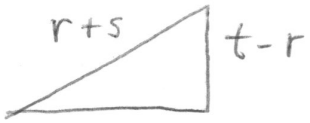
These midpoints are the feet of perpendiculars from A to the chords through B, so this is the same as #265.



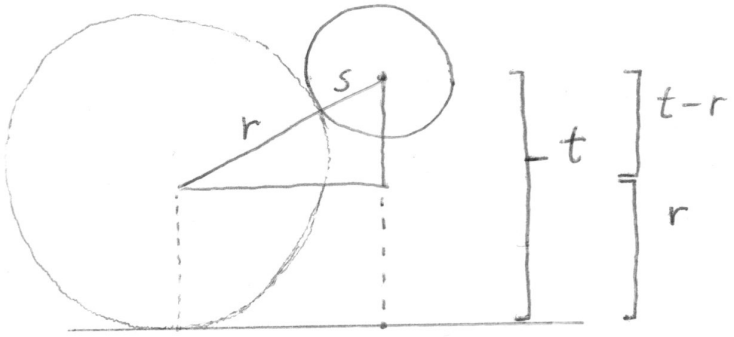
281. Circle of given radius tangent to a given line and to a given circle.

Given radius r, given circle radius s with center t from given line.

(1) Right triangle with given hypotenuse and leg

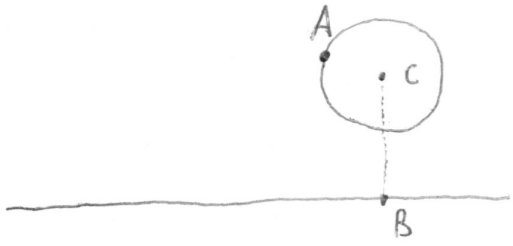


(2) Superimpose (vertex on given circle center, leg parallel to given line)

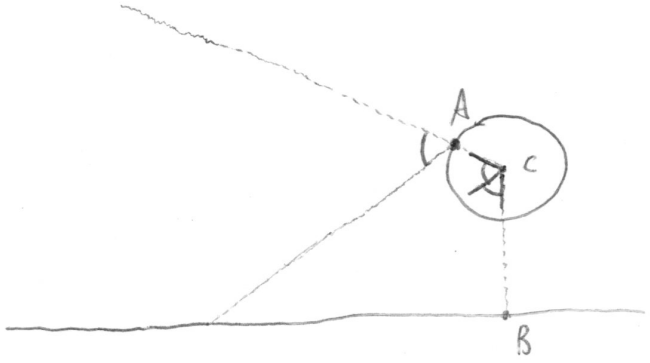


282. Circle tangent to given line and to given circle at given point:

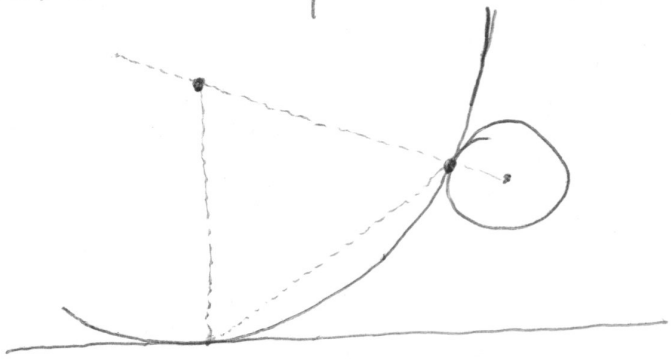
Given



(1) Construct angle $\frac{1}{2}\angle ACB$ at A on line AC

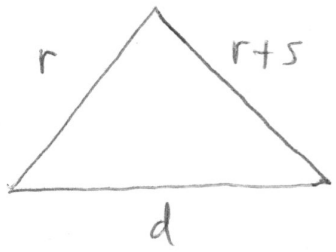


(2) Construct perpendicular to given line at new intersection point, intersect with ray CA to obtain desired circle center.



283. Circle tangent to a given circle, of radius s, and tangent to a given line at a given point, this point a distance d from the given circle center.

(1) Construct a triangle with base d and given difference s of the other two sides:



(2) Superimpose (vertex on given circle center, other vertex on given point on line)