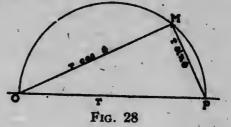
## A BRIEF TREATISE ON TRIGONOMETRY

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no very general principles of operation can be laid down; and even the construction of a given case may admit of a number of variations of which some are more elegant than others. The following will serve to illustrate the subject:

Ex. 1. To construct an angle whose sine is given. Take any line-segment OP as radius and on it describe



the semicircle OMP. In this semicircle place the chord  $PM = OP \times given size$ , and join MO.

Then MOP is the required angle. This gives the smallest angle, but the supplement of MOP has the same sine.

A similar construction finds an angle whose cosine is given. For if the chord OM be made equal to r times the given cosine, MOP is the required angle.

Ex. 2. To construct an angle whose tangent is given. Take an arbitrary segment, OA, as radius and draw

