COSE 483-00

Homework 4

Date . . . No.

1. $\frac{10-j5}{50} = 0.2-j0.1$ · plot at A

$|\Gamma| = \frac{|OA|}{|OZ|} = \frac{5.53}{8.22} = 0.67$

$\theta_\Gamma = -168°$

$\Gamma = 0.67 \angle -168°$

$= -0.66 - j0.14$

2. $|\Gamma| = 0.7 = \frac{|OA|}{|OZ|} = \frac{|OA|}{822}$

$|OA| = 0.7 \times 822 = 5754$

$0.3-j0.8$

$Z_L = 50 \times (0.3-j0.8)$

$= 15-j40\ \Omega$

3. $z_L = \frac{Z_L}{Z_0}$

$= \frac{30 - j30}{75}$

$= 0.4 - j0.4$ Plot at A

a) The circle hitting max. at B

$S = 3.0$

b) load $\lambda = 0.431$ at C

$0.431 + 0.3 = 0.731$

$0.731 - 0.5 = 0.231$

load admittance at P

$0.34 - j0.11$

c) Input admittance at D

$(0.34 - j0.11) \times 75$

$25.5 - j\ 8.25$

Hw4 smith charts

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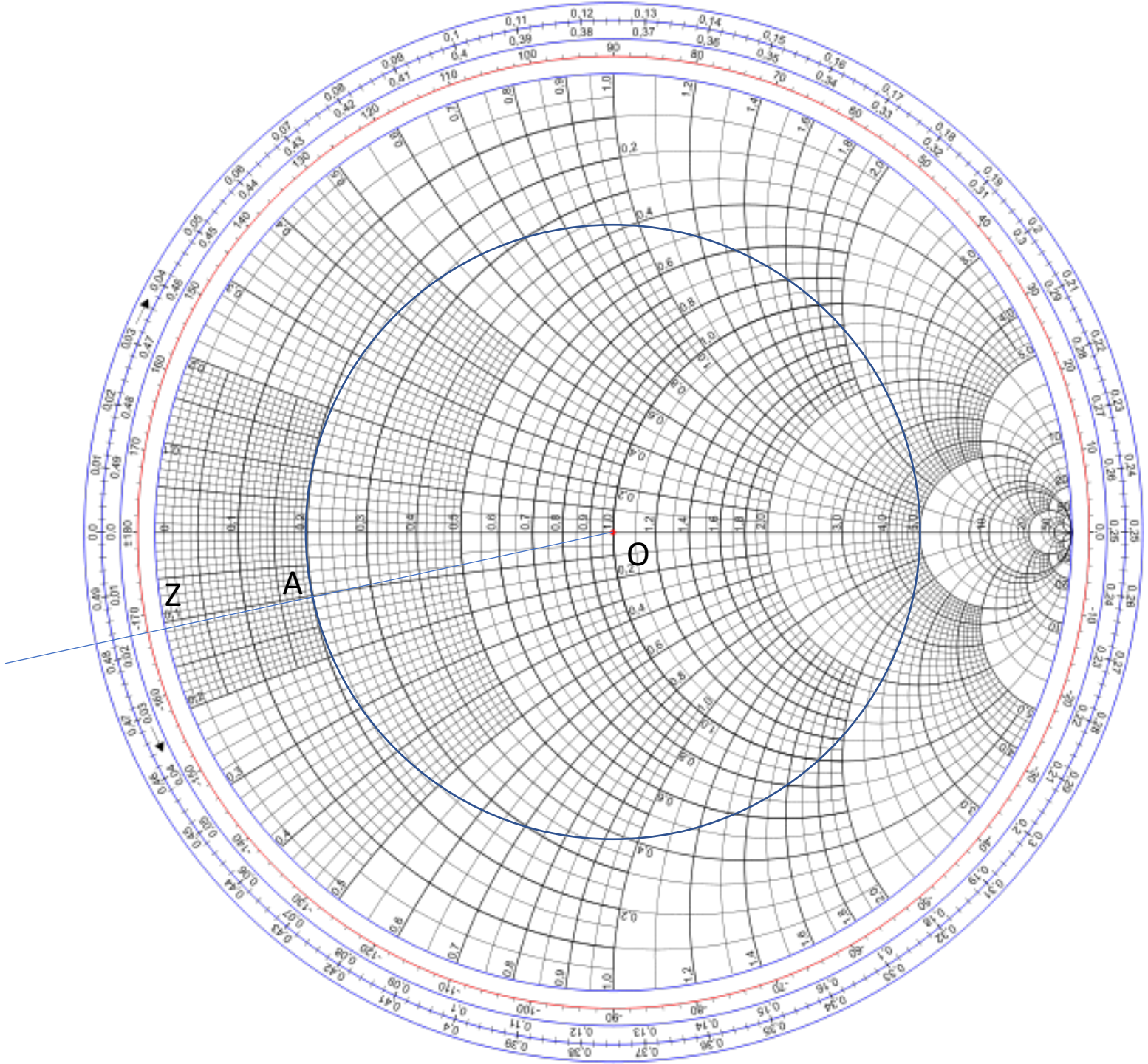
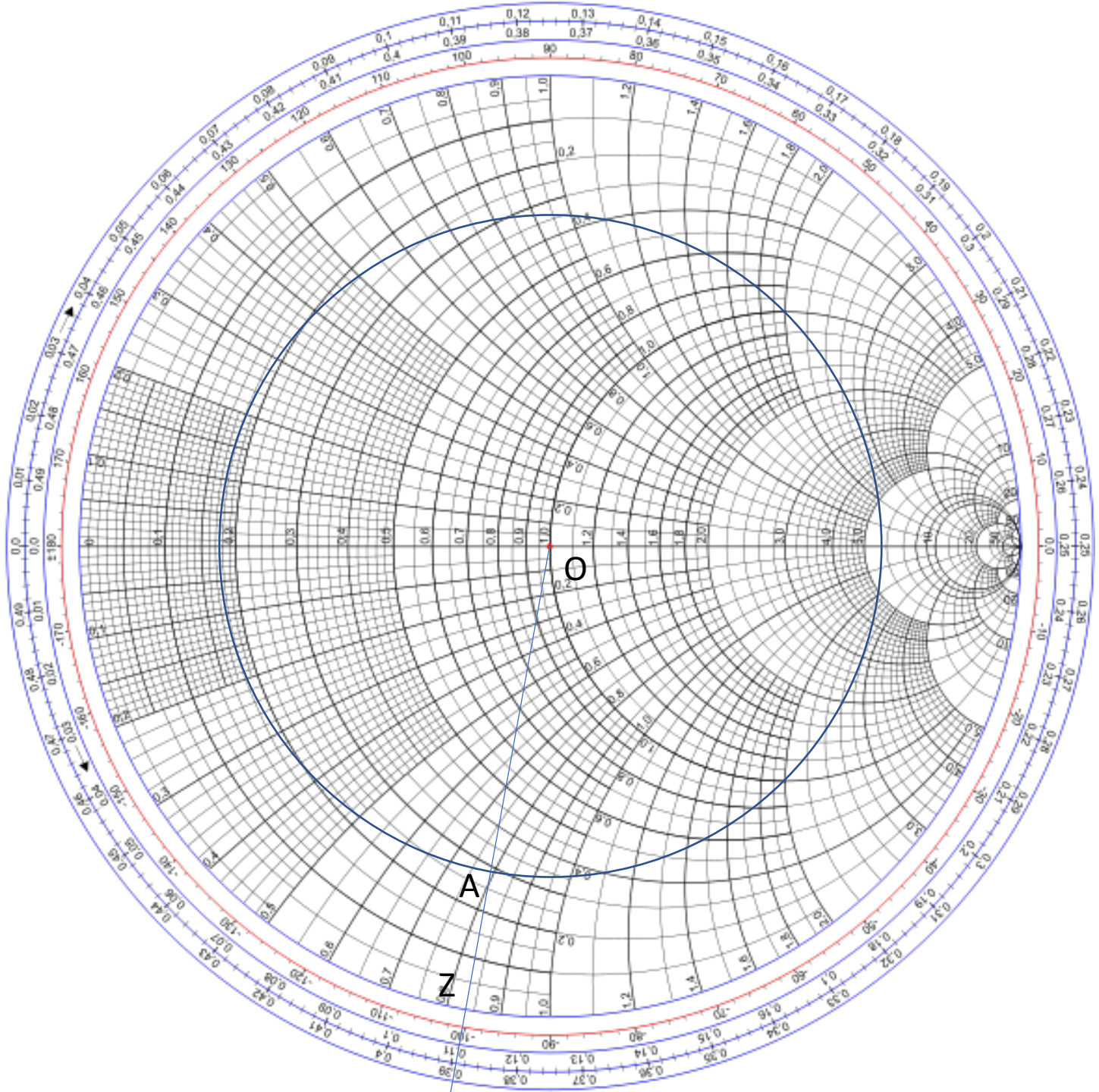

Z
A
O


O
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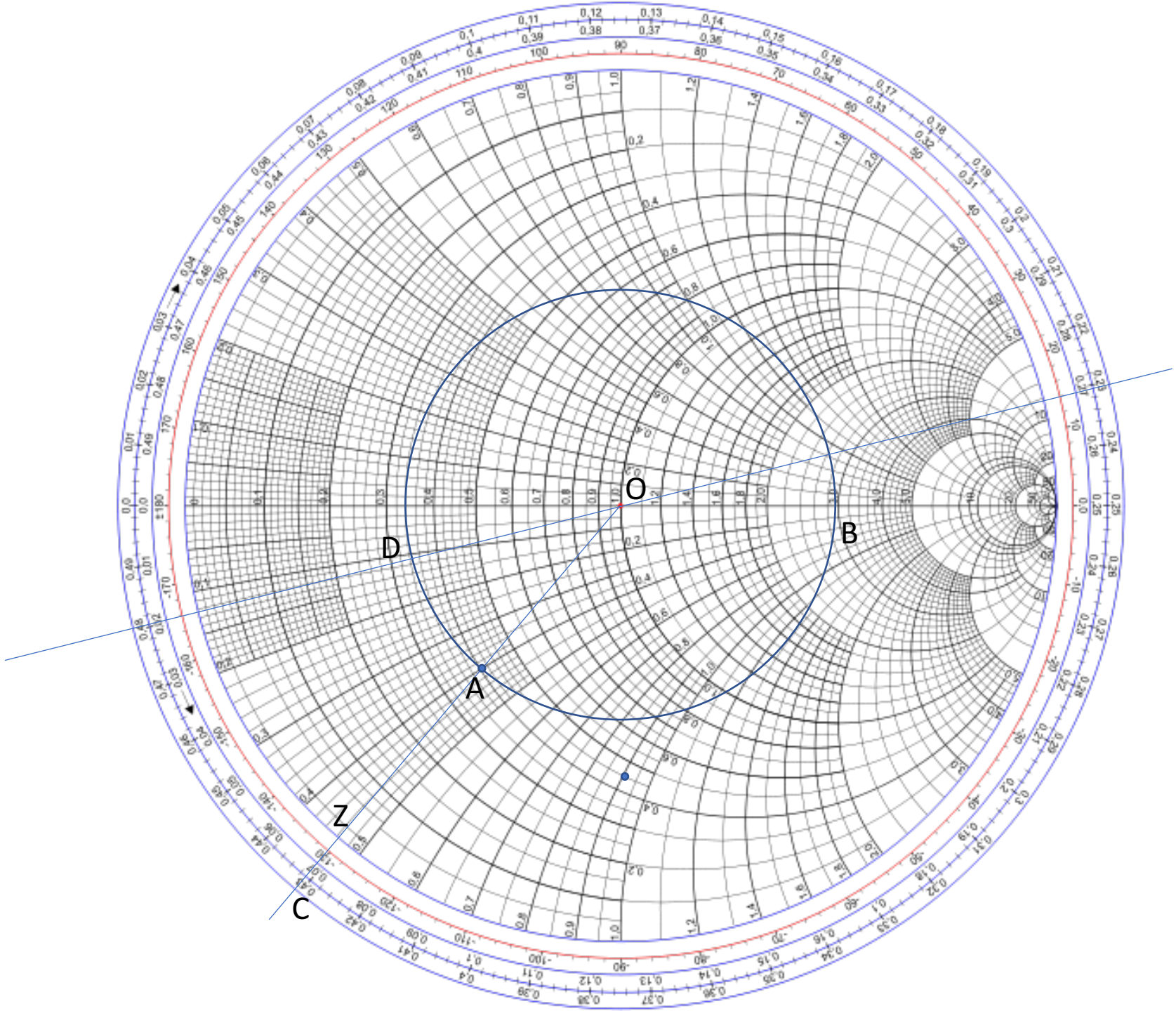
Z


O
B
D
A
Z
C