

## Example 10.3

### Result

(a)  $P$  and  $[y_i]$  for  $T=318.15\text{K}$  and  $x_1=0.25$

BUBL  $P$  calculations

$P =$

73.52

KPa

$y_1 =$

0.282

$y_2 =$

0.718

(b)  $P$  and  $[x_i]$  for  $T=318.15\text{K}$  and  $y_1=0.60$

DEW  $P$  calculations

$P =$

62.89

kPa

$x_1 =$

0.8168

$x_2 =$

0.1832

(c)  $T$  and  $[y_i]$  for  $P=101.33\text{kPa}$  and  $x_1=0$ .

BUBL  $T$  calculations

Temperature =

331.2

K

$y_1 =$

0.67

$y_2 =$

0.33

(d) T and  $[x_i]$  for  $P=101.33\text{kPa}$  and  $y_1=0.40$

DEW T calculations

T =

326.69

K

$x_1 =$

0.4598

$x_2 =$

0.5402

Azeotropic Pressure and Azeotropic Composition for  $T = 318.15\text{K}$

Azeotropic Pressure =

73.71

KPa

$x_{1\_az}$

0.325

$y_{1\_az}$

0.325