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Turma: B

Lista 08

QUESTÃO 1:

$240000 * (1 + 0,08)^{15}/0,08\ (3,17) – 2000000=$

$3000804,09 – 2000000=$

VPL= *= $ 1000804,09*

$8\% + [\ -54.274,89 / -54.274,89 - (65.434,78)\ ] * (9\% * 8\%) =$

TIR *= 8,4418%*

***QUESTÃO 2*:**

$30.000.000 + 120.000/0,12 = 30.000.000 + 1.000.000 = 31.000.000$

$[\ (1,12)^{180} - 1/(1,12)^{180} * 0,12\ ] = 723.176.125,3/86.781.135,15 = 8,3333$

$31.000.000/8,3333$

VPL *= 3.720.000/mês*

QUESTÃO 3:

$-981.815 + 100.000/(1 + TIR) + 100.000/(1 + TIR)^2 +...+ 100.000/(1 + TIR)^{20}=0\ (TIR)$

TIR *= 8%a.a.*

QUESTÃO 4:

a) $\mathbf{TIR_A =}\ -100 + 25/(1 + TIR) + 125/(1 + TIR)^2 = 0$

$\mathbf{TIR_A} = 25\%$

$\mathbf{TIR_B =}\ -100 + 95/(1 + TIR) + 45/(1 + TIR)^2 = 0$

$\mathbf{TIR_B} = 29,7\%$

b) $\mathbf{VPL_A =}\ -100 + 25/(1,1) + 125/(1,1)^2$ **= $26,03**

$\mathbf{VPL_B =}\ -100 + 95/(1,1) + 45/(1,1)^2$ **= $23,55**

QUESTÃO 5:

$0 + 80/(1 + TIR) - 100/(1 + TIR)^2 = 0$

$TIR_{\alpha-\beta}$ = 37,5%

QUESTÃO 6:

VPL_{N-V} = $-10 + 700/(1,1) - 1200/(1,1)^2$ = $ -365,4

VPL_N = $-100 + 1000/(1,1) + 200/(1,1)^2$ **= $974,38**

VPL_V = $-90 + 300/(1,1) + 1400/(1,1)^2$ **= $1.339,75**

R: Melhor V

QUESTÃO 7:

CAE_v = $12.000

CAE_n = $\frac{\$25.000}{6\,6\%}$ + 8.000 = 5.084,18 + 8.000 **= 13.084,18**

$CAE_v < CAE_n$

R: Melhor a V

QUESTÃO 8:

VPL_A= $18.000 + 2.860/(1,1) + 2.860/(1,1)^2 + L + 2.860/(1,1)^{13}$ = **$38.315,60**

CAE_A= 38.315,60/7,1033 **= $5.394,05**

VPL_B= $28.000 + 1.960/(1,1) + 1.960/(1,1)^2 + 1.960/(1,1)^{18}$ = **$44.074,76**

CAE_B= 44.074,76/8,2014 **= $5.374**

R: *Projeto B melhor*

QUESTÃO 9:

VPL_x= $-5.000 + 1.672/(1,1) + 1.672/(1,1)^2 + ... + 1.672/(1,1)^5$ = **$1.338,20**

VPL_y= $-8.000 + 1.594/(1,1) + 1.594/(1,1)^2 + ... + 1.594/(1,1)^{10}$ = **$1.794,44**

R: A alternativa X é melhor

QUESTÃO 10:

$VPL_{FABRICAR}$= $200.000 + 18.000/(1,08) + 18.000/(1,08)^2 + 18.000/(1,08)^3$

= $246.387,74

$CAE_{FABRICAR}$= $246.387,74/2,57712$ **= $95.606**

$CAE_{TERCEIRIZAR}$= $96.000

R: O melhor é fabricar

QUESTÃO 11:

sem trocar a bomba:

VPL = $450/(1,02) + 450/(1,02)^2 + ... + 450/(1,02)^5$ **= $2.121,05**

CAE_{NT} = $2.121,05/4,7137$ **= $449,98**

trocando a bomba:

VPL = $-1.230 + 250/(1,02) + 200/(1,02)^2 + 150/(1,02)^3 + 100/(1,02)^4 + 50/(1,02)^5$ **= $1.946,35**

CAE_T = $1.946,35/4,7137$ **= $412,92**

R:O melhor é trocar a bomba

QUESTÃO 12:

TIR_A= $-1.500 + 150/(1 + TIR) + 1.350/(1 + TIR)^2 + 150/(1 + TIR)^3 + 150/(1 + TIR)^4 + 600/(1 + TIR)^5 = 0$

TIR_A = inexistente

TIR_B = $-1.500 + 0/(1 + TIR) + 0/(1 + TIR)^2 + 450/(1 + TIR)^3 + 1.050/(1 + TIR)^4 + 1.950/(1 + TIR)^5 = 0$

TIR_B = 20,9%

TIR_C = $-1.500 + 150/(1 + TIR) + 300/(1 + TIR)^2 + 450/(1 + TIR)^3 + 600/(1 + TIR)^4 + 1.875/(1 + TIR)^5 = 0$

TIR_C = 22,8%

TIR_D = $-1.500 + 300/(1 + TIR) + 450/(1 + TIR)^2 + 750/(1 + TIR)^3 + 750/(1 + TIR)^4 + 900/(1 + TIR)^5 = 0$

TIR_D = 25,4%

VPL_A = $-1.500 + 150/(1,1) + 1.350/(1,1)^2 + 150/(1,1)^3 + 150/(1,1)^4 + 600/(1,1)^5$ **= $-610,22**

VPL_B = $-1.500 + 0/(1,1) + 0/(1,1)^2 + 450/(1,1)^3 + 1.050/(1,1)^4 + 1.950/(1,1)^5$ **= $766,03**

VPL_C = $-1.500 + 150/(1,1) + 300/(1,1)^2 + 450/(1,1)^3 + 600/(1,1)^4 + 1.875/(1,1)^5$ **= $796,43**

VPL_D = $-1.500 + 300/(1,1) + 450/(1,1)^2 + 750/(1,1)^3 + 750/(1,1)^4 + 900/(1,1)^5$ **= $779,19**

QUESTÃO 15:

CAE_{FIAT} = $25.000/2,99061 + $3.000 + $40.000/10 **= $15.359,49/ano**

CAE_{FORD} = $28.000/3,32551 + $2.800 + $40.000/11 **= $14.856,12/ano**

CAE_{HONDA} = $35.000/3,83716 + $2.300 + $40.000/16 **= $13.921,33/ano**

CAE_{TOYOTA} = $32.000/3,60459 + $2.200 + $40.000/14 **= $14.212,13/ano**