

4. (7):
 $7 = \text{_____} .$ (4)

5. (8):
 $8 = \text{_____} .$ (5)

6. (,):
 $/ = \text{_____} .$ (6)

7. ():
 $= \text{_____} .$ (7)

8. ():
 $= \text{_____} .$ (8)

9. ():
 $= \text{_____} \times 100\% .$ (9)

10. :
 $NPV = \sum_{i=1}^n \frac{P_i}{(1+d)^i} - \text{_____} ,$ (10)

NPV — ;
 $P_i — ;$
 $d — ;$
 $n — () () ;$
 $— () .$

11. (PI):
 $= \frac{\sum_{i=1}^n \frac{P_i}{(1+d)^i}}{\text{_____}} .$ (11)

1. ():
 $= \text{_____} .$ (12)

2. (N):
 $N = \text{_____} .$ (13)

3. (,):
 $/ = \text{_____} .$ (14)

4. ():
 $= \text{_____} .$ (15)

5. ():
 $= \text{_____} .$ (16)

$$\left(\left(\frac{\quad - \quad}{\quad - \quad} \right) \times 100 \right) \times \quad > 0. \quad (21)$$

$\frac{\quad - \quad}{\quad - \quad}$;
 $\frac{\quad - \quad}{\quad - \quad}$;
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 $\frac{\quad - \quad}{\quad - \quad}$;
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 $\frac{\quad - \quad}{\quad - \quad}$;
 $\frac{\quad - \quad}{\quad - \quad}$;

(21),

(21).

- \vdots
- $\begin{matrix} \text{1} = 250 & \text{2} = 450 & \text{3} = 900 & \text{4} = 1500 & \text{5} = 2200 & \text{6} = \\ = 3500 & \text{7} = 5000 & & & & \end{matrix}$
- $\begin{matrix} \text{1} = 6890 & \text{2} = 10800 & \text{3} = 11960 & \text{4} = 15170 & \text{5} = \\ = 16150 & \text{6} = 17080 & \text{7} = 22780 & & \end{matrix}$
- \vdots
- $\begin{matrix} \text{1} = 25 & \text{2} = 126 & \text{3} = 414 & \text{4} = 975 & \text{5} = 1100 & \text{6} = \\ \text{6} = 1290 & \text{7} = 1400 & & & & \end{matrix}$
- \vdots
- $\begin{matrix} \text{1} = 2 & \text{2} = 18 & \text{3} = 48 & \text{4} = 54 & \text{5} = 195 & \text{6} = 410 \\ \text{7} = 770 & & & & & \end{matrix}$
- \vdots
- $\begin{matrix} \text{1} = 65 & \text{2} = 142 & \text{3} = 286 & \text{4} = 720 & \text{5} = 980 & \text{6} = \\ \text{6} = 1100 & \text{7} = 1360 & & & & \end{matrix}$
- \vdots
- $\begin{matrix} \text{1} = 7 & \text{2} = 32 & \text{3} = 52 & \text{4} = 76 & \text{5} = 170 & \text{6} = 280 \\ \text{7} = 450 & & & & & \end{matrix}$

(21):

1:

$$\left(\left(\frac{25-2}{250} - \frac{65-7}{6890} \right) \times 100 \right) \times \frac{250}{6890} = 0,0836 \times 100 \times 0,036 = 0,301\%$$

2:

$$\left(\left(\frac{126-18}{450} - \frac{142-32}{10800} \right) \times 100 \right) \times \frac{450}{10800} = 0,230 \times 100 \times 0,042 = 0,966\%$$

3:

$$\left(\left(\frac{414-48}{900} - \frac{286-52}{11960} \right) \times 100 \right) \times \frac{900}{11960} = 0387 \times 100 \times 0,075 = 2,902\%$$

4:

$$\left(\left(\frac{975-54}{1500} - \frac{720-76}{15170} \right) \times 100 \right) \times \frac{1500}{15170} = 0,572 \times 100 \times 0,099 = 5,663\%$$

5:

$$\left(\left(\frac{1100 - 195}{2200} - \frac{980 - 170}{16150} \right) \times 100 \right) \times \frac{2200}{16150} = 0,361 \times 100 \times 0,136 = 4,910\%$$

6:

$$\left(\left(\frac{1290 - 410}{3500} - \frac{1100 - 280}{17080} \right) \times 100 \right) \times \frac{3500}{17080} = 0,203 \times 100 \times 0,205 = 4,160\%$$

7:

$$\left(\left(\frac{1400 - 770}{5000} - \frac{1360 - 450}{22780} \right) \times 100 \right) \times \frac{5000}{22780} = 0,086 \times 100 \times 0,219 = 1,883\%$$

4, (5,663%) ,
0,0988 9,89%.

8-10%,

6-8

2008

?

	, %					
	1	3	5	10	15	15
1. 1	45	25	20	10	—	—
2. 2	35	35	25	15	—	—
3. 3	25	30	20	20	5	—
4. 4	20	25	25	20	10	—
5. 5	10	15	20	25	15	15

*

$$Z = \sum_{j=1}^n jX_j + \sum_{k=1}^p C_k X_k \rightarrow \max \quad (22)$$

1. ;

$$\sum_{j=1}^n X_j + \sum_{k=1}^p X_k \leq Q \quad (23)$$

2. ;

$$B \leq \sum_{j=1}^n X_j \leq A \quad (24)$$

3. ;

$$V \leq \sum_{k=1}^p X_k \leq G \quad (25)$$

4. ;

$$H^1_{ij} \geq X_{ij} \geq H^2_{ij} \quad (26)$$

5. ;

$$D^1_k \geq Y_k \geq D^2_k \quad (27)$$

6. ;

$$X_{ij} > 0; X_k > 0 \quad (28)$$

X_j — ;
 X^k_{ij} — ;
 j — ;
 k — ;
 n — ;
 j — ;
 k — ;

Q — ;
 — ;
 G — ;
 V — ;
¹j, ²j — ;
 D¹_k, D²_k — ; k-
 2011 .) (. 2).

2

(. .)*

-	-	-	-	-	-
1	-	1600	12	-	0
2	-	2600	13	-	50
3	-	2200	14	-	0
4	-	2800	15	-	0
5	-	3000	16	-	100
6	-	2700	17	-	50
7	-	1200	18	-	0
8	-	200	19	-	900
9	-	100	20	-	700
10	-	500	3	-	200
11	-	100	Z	-	3864

* MathCad

90,5 : 9,5, 9,5%. 3864 90,5%,

1. . . . // .—2000.— 8.— .123-131. /

2. - - . . // .—2009.— 2.— .126-132. -

3. / . . . // .—2006.— 9.— .28-33. -

4. . . . // .—2005.— 3.— .107-111. / . . ,

5. . . . : . / . . , . . ,

6. . . . : . ,2003.— 732 . / . . .—

7. . . . : . ,2003.— 376 .

8. / . . . , . . . // .—2008.— 6.— .6-9. -

9. :[. . .]/ . . .— : -

2005.— 32 . : . . . [. . .] ;