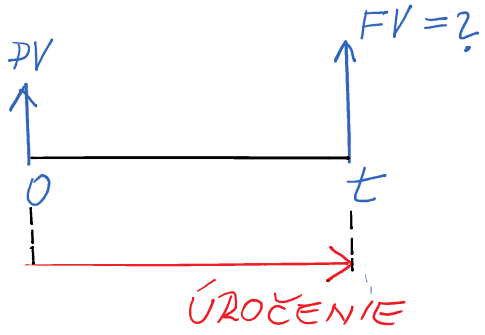
Jednoduché úrokovanie, matematický a obchodný diskont, zmenky

streda 18. februára 2026 10:00

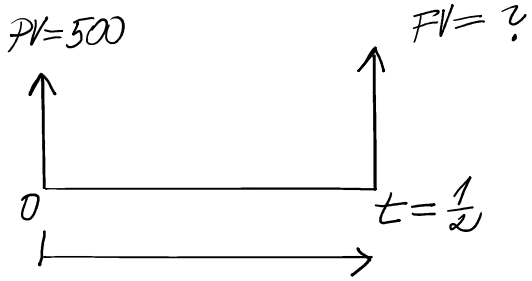
JEDNODUCHÉ ÚROKOVANIE

$$FV = PV(1+it)$$



PR: $PV = 500$, $i = 0{,}05$, $t = \frac{1}{2}$, $FV = ?$

$FV = PV(1+it) = 500\left(1+0{,}05\cdot\frac{1}{2}\right) = 512{,}5$



$(I = FV - PV = 12{,}5)$

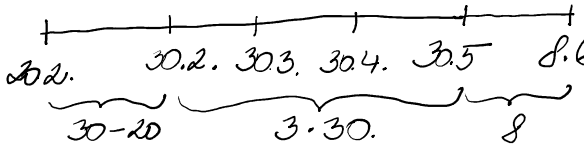
PR1 20. 2. 2012 → 8. 6. 2012

$PV = 500$, $i = 0{,}06$, $I = ?$

$I = PV \cdot i \cdot t$

$I = 500 \cdot 0{,}06 \cdot \frac{108}{360} = 9$

NEMECKÝ ŠTANDARD



$t_1 = \frac{30-20+3\cdot30+8}{360} = \frac{108}{360}$

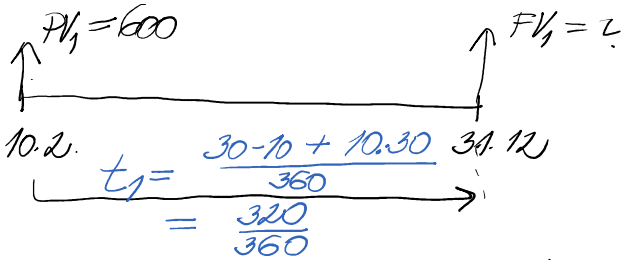
PR3 $PV_1 = 600$ 10. 2. → 31. 12.; $PV_2 = 500$ 12. 4. → 31. 12.; $PV_3 = 400$ 16. 6. → 31. 12.; $i = 0{,}03$, $I = ?$, $FV = ?$

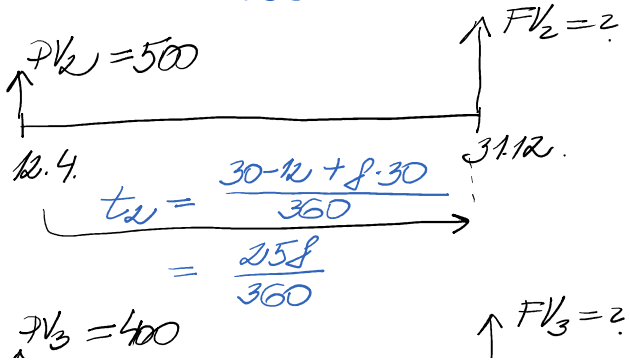
$FV = FV_1 + FV_2 + FV_3$

$PV = PV_1 + PV_2 + PV_3$

$I = FV - PV$

$FV = PV(1+it)$



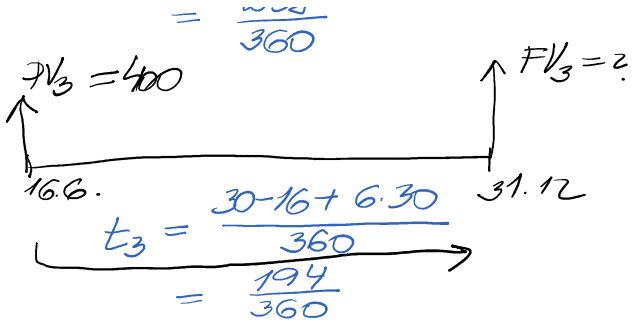


$FV = PV(1+it)$

$FV_1 = 600\left(1+0{,}03\cdot\frac{320}{360}\right) = 616$

$FV_2 = 500\left(1+0{,}03\cdot\frac{258}{360}\right) = 510{,}75$

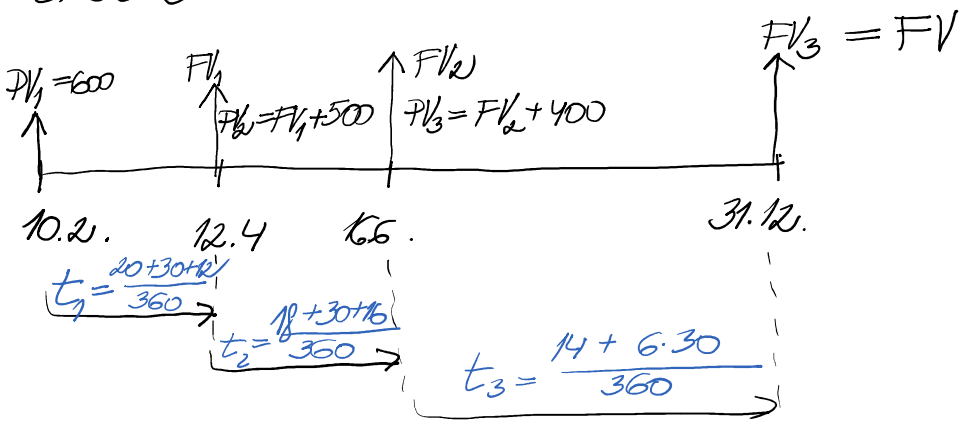
$FV_3 = 400\left(1+0{,}03\cdot\frac{194}{360}\right) = 406{,}47$



$FV = 616 + 510{,}75 + 406{,}47 = \underline{1533{,}22}$

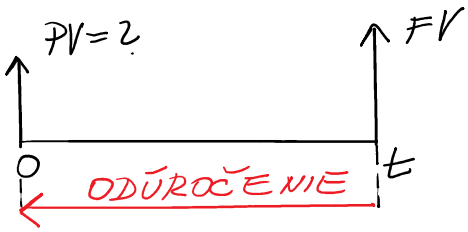
$I = FV - PV = 1533{,}22 - (600+500+400) = \underline{33{,}22}$

INÝ SPÔSOB RIEŠENIA



VÝPOČET SÚČASNEJ HODNOTY = ODÚROČENIE

$FV = PV(1+it) \Rightarrow PV = \frac{FV}{1+it}$



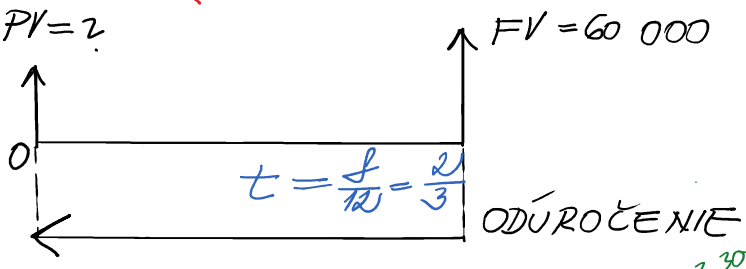
PR. $FV = 60\ 000$

$i = 0{,}06$

$t = \frac{8}{12} = \frac{2}{3}$

$PV = ?$

$PV = \frac{FV}{1+it}$



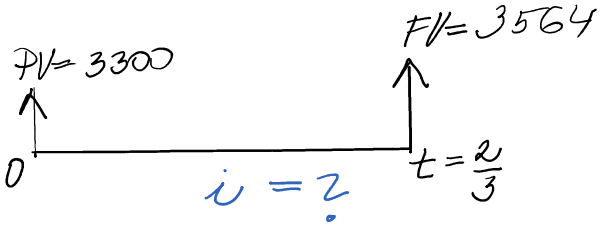
$PV = \frac{60\ 000}{1+0{,}06\cdot\frac{2}{3}} = \underline{57\ 692{,}308}$, $\left(= \underbrace{60\ 000}_{FV} - I = 2307{,}692\right)$

VÝPOČET ÚROKOVEJ MIERY

$FV = 3564$

VÝPOČET ÚROKOVEJ MIERY

PR. $PV = 3\,300$
$FV = 3\,564$
$t = \frac{8}{12} = \frac{2}{3}$
$i = ?$



$FV = PV(1+it)$

$3564 = 3300\left(1+i\cdot\frac{2}{3}\right) \quad /:3300$

$\frac{3564}{3300} = 1+i\cdot\frac{2}{3} \quad /-1$

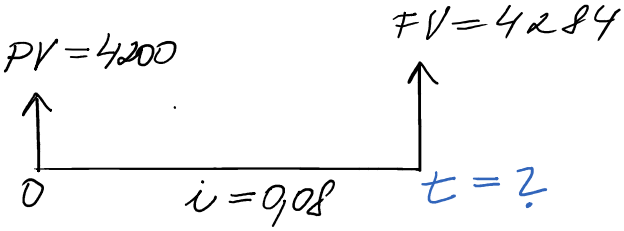
$\frac{2}{3}i = \frac{3\,564}{3\,300} - 1 \quad /\cdot\frac{3}{2} \quad (:\frac{2}{3})$

$i = \left(\frac{3\,564}{3300} - 1\right)\cdot\frac{3}{2} = 0{,}12$ (SADZBA)

$i\cdot 100\% = 0{,}12\cdot 100\% = 12\%$ (MIERA)

VÝPOČET ÚROKOVÉHO OBDOBIA

PR $PV = 4\,200$
$FV = 4\,284$
$i = 9\%$
$t = ?$ (mesiace)



$FV = PV(1+it)$

$4284 = 4\,200\,(1+0{,}08\,t) \quad /:4200$

$\frac{4284}{4200} = 1+0{,}08\,t \quad /-1$

$9\% = \frac{9}{100}$

$0{,}08t = \frac{4284}{4200} - 1 \quad /:0{,}08 \quad (\cdot\frac{100}{8})$

$t = \left(\frac{4284}{4200} - 1\right)\cdot\frac{100}{8} = 0{,}25$

počet mesiacov: $0{,}25\cdot 12 = 3$ mesiace

↑ POČET MESIACOV V ROKU

MATEMATICKÝ DISKONT

$D_m = \frac{FV\cdot i\cdot t}{1+it}$ $(= I)$

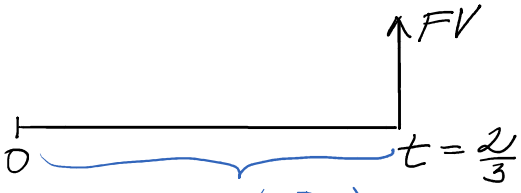
$I = PV\cdot i\,t$ DOSADÍME
$PV = \frac{FV}{1+it}$

PR. $FV = 60\,000$
$i = 12\%$

$FV = 1+it$ |

PR. $FV = 60\,000$
$i = 9\%$
$t = \frac{8}{12} = \frac{2}{3}$

$D_m = ?$



$I (= D_m) = ?$

$$D_m = \frac{FV \cdot it}{1+it} = \frac{60000 \cdot 0{,}06 \cdot \frac{2}{3}}{1+0{,}06 \cdot \frac{2}{3}} = 2\,304{,}69\,€$$

OBCHODNÝ DISKONT

$D_o = FV \cdot it$ $\qquad PV = FV(1-t \cdot d)$

PR: $FV = 15\,000$
$d = 0{,}2$
$t = \frac{4}{12} = \frac{1}{3}$

$PV = ?$

$PV = FV(1-t \cdot d)$

ODÚROČENIE DISKONTOVANÍM

$$PV = 15\,000\,(1-\tfrac{1}{3} \cdot 0{,}2) = 14\,000\,€ \qquad (D_o = FV - PV = 1000)$$

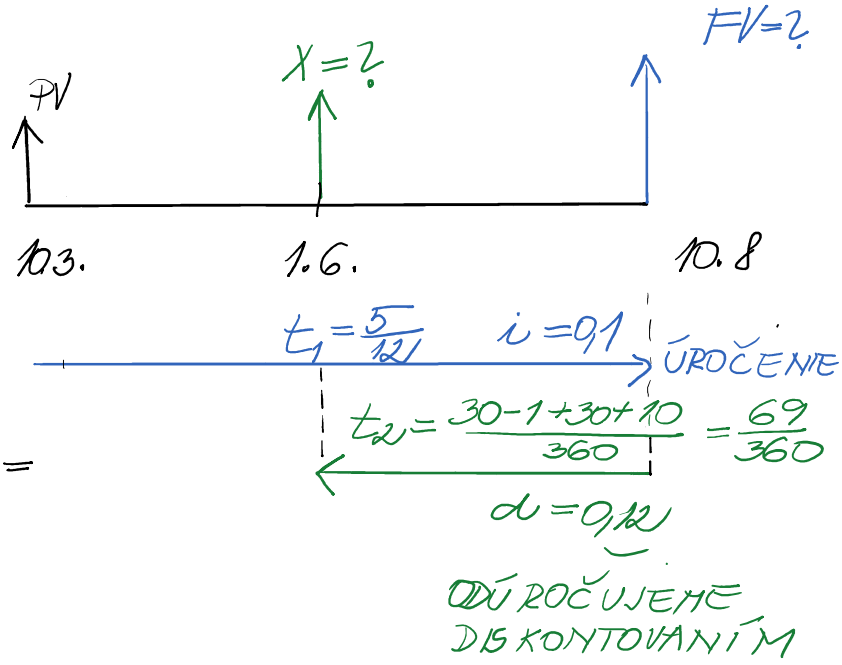
ZMENKY

PR. $PV = 10\,000$
$i = 0{,}1$
$d = 0{,}12$
$t_1 = \frac{5}{12}$
$t_2 = \frac{69}{360}$

$X = ?$

$FV = PV(1+it)$

1) $FV = 10\,000(1+0{,}1 \cdot \frac{5}{12}) = 10\,416{,}67\,€$



2) $PV = FV(1 - t \cdot d)$

$X = FV(1 - t_2 \cdot d) =$

$= 10\,416{,}667\left(1 - \frac{69}{360} \cdot 0{,}12\right) = 10\,177{,}083$;