

# EDST5107

HYUWX]b[ 'A Yh\cXg'Zcf'< [[ \ 'bW]XYbW'8 ]gUV`]h]Yg

GYa YghYf'CbY''##'&\$%



7ci fgY'8YHJ]`g

7fYX]hDc]bhtg`\*`

Gi a a UfmicZh\Y'7ci fgY

H\Y`ZcW`g`cZh]g`Wci`fgY`]g`cb`ghi`XYbhtg`k`]h`\"[`\!]bW]XYbW`X]gUV`]h]Yg" `#`h]g`Wci`fgY`z`ghi`XYbhtg`k`]`VY`dfYgYbh`X`k`]h`Wc`[`b]h]`Y`z`d`Y`f`W`d`h`U`z`U`b`[`i`U`[`Y`z`U`W`U`X`Y`a`]`W`Y`U`f`b`]`b`[`z`U`b`X`g`c`W`U`!`Y`a`c`h`c`b`U`W`U`f`U`W`W`f`]`g`h`W`g`c`Z`h`Y`g`Y`d`c`d`i`U`h`c`b`g`" `#`g`i`Y`g`]`b`U`g`g`Y`g`g`a`Y`b`h`z`W`f`f`]`W`i`a`U`b`X`]`b`g`h`i`W`]`c`b`z`U`b`X`d`U`W`a`Y`b`h`k`]`U`g`c`V`Y`X`]`g`W`g`g`Y`X`" `H`\"g`Wci`fgY`k`]`d`f`c`j`]`X`Y`g`h`i`XYbhtg`k`]`h`]`b`g`h`i`W`]`c`b`c`b`U`d`d`n`]`b`[`h`Y`[`c`U`g`z`]`b`h`f`j`Y`b`h`c`b`g`f`U`h`[`]`Y`g`z`U`b`X`d`f`c`W`X`i`f`Y`g`f`Y`U`h`X`h`c`d`g`m`V`X`c`X`n`b`U`a`]`V`Y`Y`U`j`]`c`i`f`U`z`V`]`c`d`l`n`g`]`W`z`U`b`X`Y`W`c`c`[`]`W`U`d`d`f`c`U`W`X`Y`g`h`c`]`b`X`j`]`X`i`U`g`k`]`h`X`]`g`U`V`]`h]Yg"

5h\Y`W`c`b`W`i`g]`c`b`c`Z`h`]`g`W`c`i`fgY`h`Y`g`h`i`XYbhtg`]`V`Y`U`V`Y`h`c`

% " 8Ya`cbg`f`U`h`Y`W`]`h]`W`U`U`d`d`f`Y`W`]`U`h`c`b`U`b`X`d`U`f`h]`W`d`U`h`Y`]`b`X`]`g`W`g`g`]`c`b`c`Z`g`Y`a`]`b`U`]`g`g`i`Y`g`]`b`Y`X`i`W`h`c`b`c`Z`f`g`h`i`XYbhtg`k`]`h`]`g`d`Y`W`U`b`Y`Y`X`g`&" 8Yj`Y`c`d`i`b`X`Y`f`g`h`U`b`X`]`b`[`c`Z`U`k`g`z`d`c`]`W`Y`g`z`U`b`X`Y`h`]`W`U`d`f`]`b`W`]`d`Y`g`f`Y`[`U`f`X`]`b`[`Y`X`i`W`h`c`b`c`Z`g`h`i`XYbhtg`k`]`h`]`g`d`Y`W`U`b`Y`Y`X`g`' " 8Ya`cbg`f`U`h`Y`U`b`i`b`X`Y`f`g`h`U`b`X`]`b`[`c`Z`f`Y`g`Y`U`f`W`!`V`U`g`Y`X`g`h`f`U`h`Y`[`]`Y`g`Z`c`f`]`b`X`j`]`X`i`U`W`f`f`]`W`i`a`!`V`U`g`Y`X`U`g`g`Y`g`g`a`Y`b`h`z`d`U`b`b`]`b`[`z`U`b`X`]`b`g`h`i`W`]`c`b`(` " 7cbXi`W`h`]`b`X`Y`d`Y`b`X`Y`b`h`f`Y`g`Y`U`f`W`]`b`h`c`U`W`f`f`Y`b`h`h`c`d`]`W`]`g`g`i`Y`f`Y`Y`j`U`b`h`h`c`Y`U`f`b`Y`f`g`k`]`h`Y`U`f`b`]`b`[`

H\YgY'UWj] jhYg'k ]''cVW f' ]b'U'W]a UH' h.Uh]g'gi ddcfhj Y'UbX' ]bW' g]j Y'cZU''''YUfbYfg"



5ggYgga Ybh

5ggYgga YbhHUg\_g'

5ggYgga YbhHUg_	K Y][ \h	Gh XYbh@YUfb]b[ Ci hWta Yg 5ggYggYX	5 #HG@DfcZYgg]cbU'; fUXi UHY HYUW]b[ 'GHUbXUfXg'5ggYggYX	8i Y 8UHY

DUfh%` ðbghfi WñcbU` ãggi Yg. 7\ccgY`rk c`f&L`cZH\Y`X]gUV]`]ñYg`X]gW`ggYX`Xi`f]b[ `h\Y`V`i`fgY`f58<8ž  
Ya`ch]cbU`X]gh`fVUbWž`bñY`YWi`U`X]gUV]`]mž`gdYW]Z]WYUfb]b[ `X]gUV]`]ñYgE":`cf`Vch`cZH\Y`X]gUV]`]m  
WñY[`cf]Yg`mci` \Uj`Y`W`cgYb.`XYgW]VY`cf`]XYbh]ZmcbY`]a`dcfñUbh]bghfi`WñcbU`]ggi`Y`h`Uha`UmVY`bYVW`ggUfm  
h`UXXfYgg`]b`cfXYf`Zcf`mci`h`gi`WV`ggZ`mñY`UVX`U`ghi`XYbhk`]h`h`UhiX]gUV]`]m]b`h`Y`[`YbYfU`YXi`Wñcb  
gYñ]b[ "`H\Y`]a`dcfñUbh]bghfi`WñcbU`]ggi`Yg`g`ci`X`bchVY`]XYbh]W`Zcf`h`Y`rk`c`X]gUV]`]ñYg`h`Uhi`mci` \Uj`Y`  
W`cgYb"

DUfh&.` ðbghfi WñcbU` ãggi Yg`8]gW`gg]cb.`: `cf`YUW`]bghfi`WñcbU`]a`d`]Wñcb`mci`X]gW`gg`]b`DUfh%UVcj`Yž  
]ghcf`X]gW`gg`DchYbh]U`F`Ygci`fW`g`fñ`UW`gž`YI`dYf]YbW`gž`V`i`fgYk`cf`ž`dYfgcbgž`YhW`E`h`Uha`][`h`iVY  
i`ñ]gYX`h`c`Vh]b`h`Y`]bZ`fa`Uñcb`cf`gi`ddcfñb`YYXYX`h`c`XYU`k`]h`h`cgY`]bghfi`WñcbU`]ggi`Ygž`UbX`DchYbh]U`  
GhUñ[`]Yg`f]bghfi`Wñcbž`a`cX]Z]Wñcbgž`UXUdñUñ]cbgž`YhW`E`h`Uhi`mci`a`][`h`iYa`d`cmi`h`UXXfYgg`h`Y`W`U`Yb[`Yg  
dfYgYbhYX`Vmi`h`Uñ]bghfi`WñcbU`]ggi`Y"

DUfh'` .`5ggYgga`Ybh`8]gW`gg`gca`Y`UW`a`a`cXUñcbg`UbX`a`cX]Z]Wñcbg`h`Uhi`Wñb`VY`a`UXY`k` \Yb  
UggYgg]b[ `h`Y`Y`Ufb]b[ `c`Zgh`XYbh`k`]h`h`YgY`dUñW`Uf`X]gUV]`]ñYg"

H\Y`YggUm`g`ci`X`VY`k`f]ñY`b`]b`5D5`\*`h`YX]ñcb`gmYž`VY`Uddfc]`]a`Uñ`m&žž`k`cfXg`]b`Yb[`h`ž`UbX  
V`b`h]b`Uñ`Y`Ugh`%`W`ffYbh`rk`]h`]b`h`Y`Ugh`%`m`Y`Ufgž`VY`rk`YYb`&žž`-`UbX`&ž%`E`dY`f`fYj`]Yk`YX`ci`fbU`  
Uñ]WYg"

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gh XYbng`UfY`YI dYW`X`hc`di h`h`Y]f`bUa Yg`UbX`gh XYbhbi a VYfg`cb`Yj YfmdU[ Y`cZ`h`Y]f`Ugg][ ba Ybhg"

Hi fb]h]b`Gi Va ]gg]cb

≠mci`YbWci bhYf`U`dfcV`Ya`k`Yb`U`h`Ya`dh]b[`hc`gi Va ]hmcif`Ugg][ ba Ybh`h`fci [ `h`Hi fb]h]b`z`d`YUgY  
h`Y`d`cb`Y`9I`h`fb`U`Gi`ddcfh`cb`-`'`,`)`''`'`%cf`Ya`U]`h`Ya`cb`[YI`h`fb`U`h`h`gi`ddcfh`i`bgk`"YXi`"Ui`"Gi`ddcfh](#)



f`G][ b]Z]W]b]h]m]U]Z]Y]W]h]m]i] f]d]Y]f]Z]c]f]a] U]b]W]W] ]b]U]g]g]Y]g]g]U]V]`]Y]`]k] c]f]\_]Z]V]Y]`]h]U]`]Z]c]f]a] U]`]Y]b]X]!]c]Z]g]Y]a] Y]g]h]Y]f]`]Y]I] U]a] ]b]U]h]c]b]Z]U] W]U]g]g]`]h]Y]g]h]Z]U]`]U]V]c]f]U]h]c]f]m]i]h]Y]g]h]Z]U]`]g]Y]a] ]b]U]f]d]f]Y]g]Y]b]h]U]h]c]b]`]c]f]U]b]m]i]c]h]Y]f]`]Z]c]f]a] `]c]Z]U]g]g]Y]g]g]a] Y]b]h]

: c]f]`]Z] f]h]Y]f]`]X]Y]h]U]`]g]`]b]`]f]Y]`]U]h]c]b]`]h]c]`]G]d]Y]W]U]`]7]c]b]g]X]Y]f]U]h]c]b]`]b]W]i] X]b] [ ]`]K] \]Y]b]`]h]c]`]5]d]d]`]m]Z]`]<]c]k]`]h]c]`]5]d]d]`]m]`]U]b]X] `]G]i] d]d]c]f]h]b] [ ]8]c]W] a] Y]b]h]U]h]c]b]`]d]`]Y]U]g]Y]`]f]Y]Z]f]`]h]c]`]h]Y]`]G]d]Y]W]U]`]7]c]b]g]X]Y]f]U]h]c]b]`]k] Y]V]g]h]Y]`].`

[\\]h\]c\]g.\]#\]g\]h\] X\]Y\]b\]h\]i\] b\]g\]k\] "Y\]X\]i\] "U\]i\] #\]g\]d\]Y\]W\]U\]`\]!\]W\]c\]b\]g\]X\]Y\]f\]U\]h\]c\]b\]](#)

## 5 WUXYa ]W<c bYghmUbX 'D`U[ ]Uf]ga

D`U[ ]Uf]ga ]g'i g]b[ 'hY`k cfXg'cf]XYUg'cZchYfg'UbX'dfYgYbh]b[ 'hYa`Ug'mci f'ck b" #WUb`hU\_Y'a Ubm Zcfa gž Zca`XY]VYfUHy`WXYU]b[ 'hc`UWV]XYbU`mWčdm]b[ Zca`U`gci fW`k ]hci hUW\_bck`YX[ Ya`Ybh'

I BGK`[ fci dg'd`U[ ]Uf]ga`]bhc`hY`Zc`ck ]b[`WUHy`[ cf]Yg.

7cdm]b[.`i g]b[ 'hY`gUa`Y`cf`j`Yfmg]a`]Uf`k`cfXg`hc`hY`cf][ ]bU`hY`hcf`]XYU`k`]hci`hUW\_bck`YX[ ]b[ 'hY`gci`fW`cf`i`g]b[`ei`chU]cb`a`Uf`g`"H`]g`U`gc`Udd`]Yg`hc`]a`U[ Ygž`Ufh`UbX`XYg][`b`dfc`YWgž`Ug`k`Y`"Ug`dfYgYbU]h]cbg`k`YfY`gca`YcbY`dfYgYbh]g`Ubc`h`Y`f`g`]XYUg`cf`k`cfXg`k`]hci`hWYX]h'

#Uddfcdf]UHy`dUfUd`fUg]b[.`W`Ub[ ]b[`U`Zy`k`cfXg`UbX`d`fUgYg`k`Y`a`cghm`fYU]b]b[ 'hY`cf][ ]bU`g]fi`W`fY`UbX`]bZcfa`U]cb`k`]hci`hUW\_bck`YX[ Ya`Ybh`"H`]g`U`gc`Udd`]Yg`]b`dfYgYbU]h]cbg`k`YfY`gca`YcbY`dUfUd`fUgYg`Ubc`h`Y`f`g`]XYUg`cf`k`cfXg`k`]hci`hWYX]h'" #U`gc`Udd`]Yg`hc`d`]YW]b[`hc`[ YhYf`ei`chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk`k`c`Yž`k`]hci`hYfYfYbW]b[`UbX`U`gh`XYbh]g`ck`b`UbU`mg]g`hc`Vf]b[ 'hY`a`UHyf]U`hc`[ YhYf`"

7c`i`g]cb.`k`cf\_]b[`k`]h`chYfg`Vi`hdUgg]b[`cZ`hY`k`cf\_]`Ug`U`dYfgcb`g`]bX]j`]Xi`U`k`cf\_]`7c`i`g]cb`U`gc`]bWi`XYg`dfcj`]X]b[`mci`f`k`cf\_]`hc`Ubc`h`Yf`gh`XYbhVYZc`fY`hY`Xi`Y`XUHy`ž`cf`Zc`f`hY`di`fdcgY`cZ`h`Ya`d`U[ ]Uf]g]b[`Uh`Ubmi]ja`Yž`dUm]b[`Ubc`h`Yf`dYfgcb`hc`dYfZc`fa`Ub`UWUXYa`]W]Ug`ž`ghU`]b[`cf`UWči`]f]b[`Ubc`h`Yf`dYfgcb`g`UWUXYa`]Wk`cf\_]`UbX`Wč`dm]b[`]ž`c`ZYf]b[`hc`Wč`a`d`YHy`Ubc`h`Yf`dYfgcb`g`k`cf\_]`cf`gYY\_]b[`dUma`YbhZc`f`Wč`a`d`Y]b[`UWUXYa`]Wk`cf\_]`"

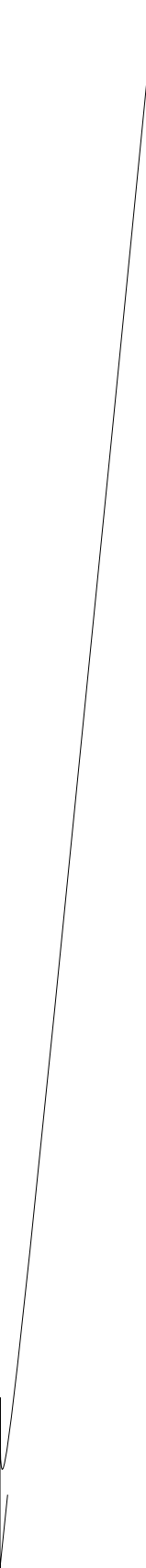
#Uddfcdf]UHy`W]U]cb.`7`]h]b[`gci`fW`g`k`]W`Uj`Y`bchVYYb`fYUXž`k`]hci`hUW\_bck`YX[ ]b[ 'hY`"gYWč`bXUfm`gci`fW`Zca`k`]W`\_bck`YX[ Y`cZ`h`Ya`U`g`VYYb`cVU]bYX`"

8i`d`]WU]cb`ffgY`Zd`U[ ]Uf]ga`"E`gi`Va`]h]b[`mci`f`ck`b`k`cf\_]b`k`c`Y`cf`]b`dUf]ž`k`YfY`]h`Ug`dfYj`]ci`g`m`VYYb`dfYdUfYX`cf`gi`Va`]hYX`Zc`f`Ubc`h`Yf`UggYgga`Ybhcf`Wč`i`fgY`Uhi`BGK`cf`Ubc`h`Yf`i`b]j`Yfg]h`"

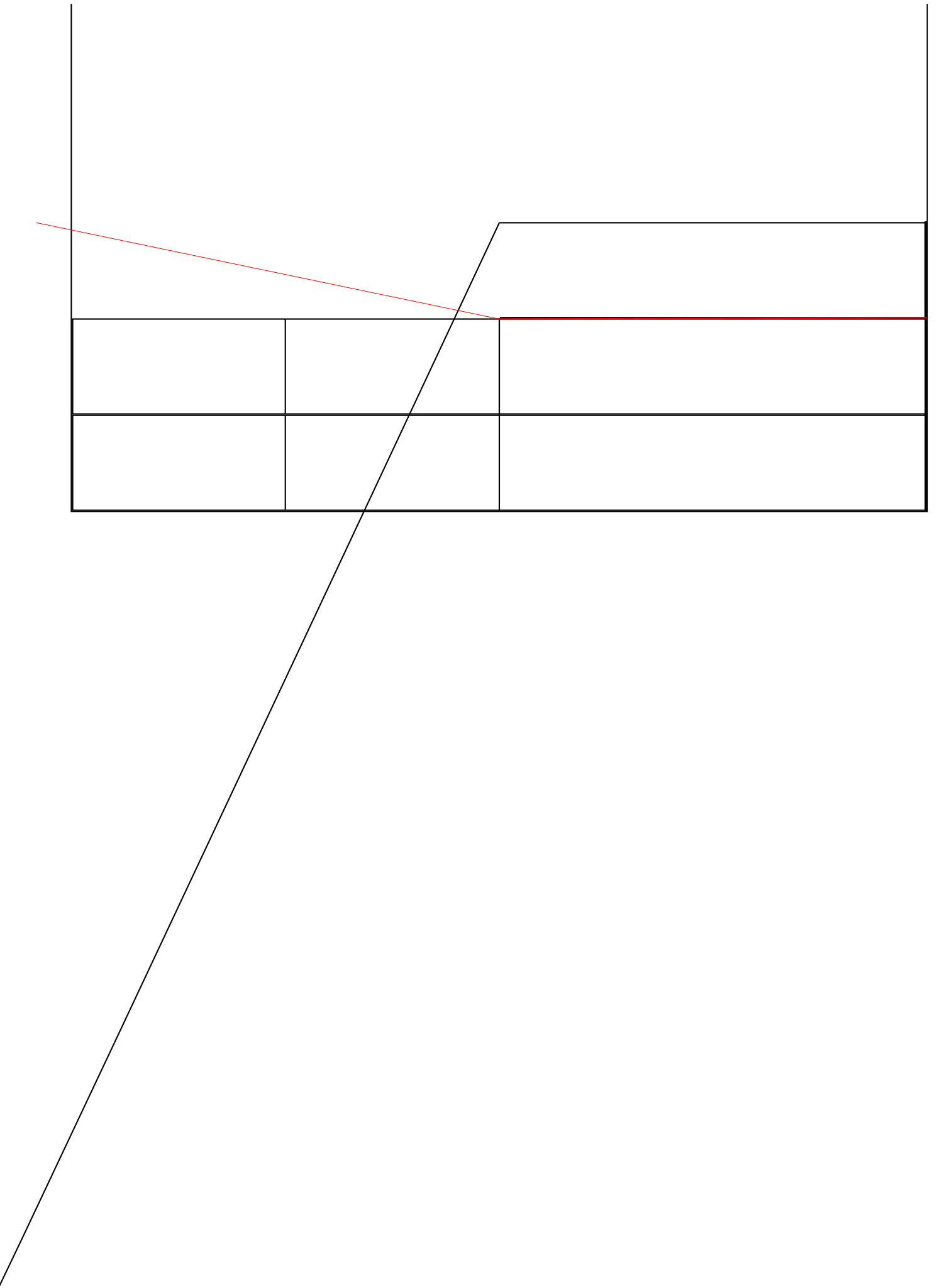
7c`ffYW`fYfYbW]b[`dfUW]W]g.

- DUFUd`fUg]b[`žgi`a`a`Uf]g]b[`žYggUm`k`f]h]b[`UbX`h]a`Y`a`UbU[`Ya`Ybh`
-

- VYhYf'a UbU[ Y'mci f'h]a Y
- i bXYfgHUbX'mci f'f][ \hg'UbX'fYgdcbg]V]hYg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[ ]Uf]ga ž'W'dmf][ \hž' BGK 'Gh XYbh7cXY'cZ7cbXi WñUbX'5WñdñUV'Y'l gY'cZ  
I BGK '⇒H'F Ygci fW'g'Dc`]Wñ







F Ygci fWg

DfYgW]VYX F Ygci fWg