

HYWXb]gWXYf'8YZY_h.: Yi Yfk Y\f < Y]bgVYf['g]WXYfh'I bZU``ghY``Y'Ui Z'6) *b

@ $OgWXY]bYY]hYbXYfT: YiYfkYYfT<Y]bgVYf[Tg]WXYfbDUbbYbZUYfnYi[TUiZ'6)*b"THYWXb]gWXYfT8YZY_hTgcf[hYTZØfGhfU»YbfY]b][ib[TibXT5VgWXYddX]Ybgh"$

; Ya Y]bgW\UZh`]W\Yf'9]bgUhn'XYf': Yi Yfk Y\f]b'<Y]bgVYf[

9]b J cfZU```Ui Z'XYf'6i bXYgghfU» Y') *b'a cV]`]g]YfhY'\Yi hY'X]Y
: Yi Yfk Y\f'i bX'gW\i Z'Y]b'6Yk i gghgY]b'ZØf'X]Y'K]W\h][_Y]h'XYf
gW\bY``Yb'FYU_h]cb']b'Bchg]hi Uh]cbYb"'8Yf'hYW\b]gW\Y'8YZY_h
Y]bYg'D? K'ZØ\fhY'XUni ž'XUgg'X]Y'@ÒgW\Y]b\Y]hYb'K U`XYbfUh\ž
GhfUYhYb'gck]Y'XYf'JYfk U`hi b[gX]Ybgh'XYf': Yi Yfk Y\f'<Y]bgVYf[i a [Y\YbX'U`Ufa]Yfh'k i fXYbži a 'X]Y'G]hi Uh]cb'ni 'VYk À`h][Yb"

$HYWMb]gWMYf8YZY_hU^g; YZU\f$

8 Yf'hY W. b]gW. Y'8 YZY_hž'XYf'ni 'XYa 'Gh]``ghUbX'XYg': U\fnYi [g ZØ\fhYž'j YfXYi h`]W. h'X]Y'dchYbn]Y``Yb'; YZU\fYbž'X]Y'Ui Z'GhfU» Yb Xi fW. 'a YW. Ub]gW. Y'DfcV`Ya Y'YbhghY\Yb'_ÒbbYb"'; YfUXY'VY] ghUf_'VYZU\fYbYb'GhfU» Yb'_Ubb'X]Yg'ni 'Yf\YV`]W. Yb J Yf_Y\fgVY\]bXYfi b[Yb'ZØ\fYb"

$9ZZ]n]YbhY^5Vg]WXYfib[^XYf^9]bgUhnghY^Y$

 $\label{thm:continuous} I a `Y]bY`g]WXYfY`I a [YVi b[`ni `[Yk À\f`Y]ghYbž`\UVYb`X]Y @OgWXY]b\Y]hYb`K U`XYbfUh\`i bX`GhfUYhYb`nØ[][`X]Y`9]bgUhnghY``Y UV[Yg]WXYfh"`8]YgY`A U» bU\a Yb`g]bX`YbhgWXY]XYbXž`i a `gck c\`X]Y`G]WXYf\Y]h`XYf`9]bgUhn_fÀZhY`U`g`Ui WX`X]Y`XYf`ØVf][Yb$

5i ZfÀi a UfVY]hYb i bX FY]b][i b[

9]b'k Y]hYfYf'k]W\h][Yf'Di b_h'k Uf'X]Y'FY]b][i b['XYf': U\fVU\b'j cb Ui g[Y`Ui ZYbYb'6Yhf]YVgghcZZYb"'Gc`W\Y'GW\f]hhY'g]bX'i bYf`\Agg`]W\\Zi a 'ni _\ØbZh][Y'I bZ\\`Y'ni 'j Yf\]bXYfb'i bX'X]Y'GhfU\\Yb']b'Y]bYa g]\W\YfYb'\Ni ghUbX'ni '\U`\hYb"

8]Y'Fc``Y'XYf': Yi Yfk Y\f']b'XYf ; Ya Y]bgW\UZh

 $8] YgYf'9] bgUhn'] gh'Y] b'6Y] gd] Y`XUZØfž'k] Y'k] WXh] ['X]Y': YiYfkY\fZØf'X]Y'; YaY] bgWXUZh'] b'< Y] bgVYf[']gh''G]Y'`Y] ghYh'b] WXh'bif'<]`ZY] b'Bch`U[Ybž'gcbXYfb'hfÀ[h'UiWX'nif'U``[YaY] bYb'G] WXYf\Y] h'UiZXYb'GhfU» Yb'VY]'''8] Y'fY] Vib[g`cgY'NigUaaYbUfVY] h'nk] gWXYbXYb'jYfgWX] YXYbYb'9] b\Y] hYb'nY][h'Y] b'VYY] bXfiW_YbXYg'AU»'UbDfcZYgg] cbU`] hÀh'ibX'9b[U[YaYbh'ZØf'X] Y'^2ZZYbh`] WX_Y] h''$

8]Y'9fY][b]ggY'XYg'\Yih][Yb'HU[Yg'Yf]bbYfb'i bg'XUfUbž'k]Y YbhgWXY]XYbX'X]Y'9]bgÀhnY'XYf': Yi Yfk Y\f'ZØf'X]Y'G]WXYf\Y]h'i bX CfXbi b[']b'i bgYfYb'; Ya Y]bXYb'g]bX"'8i fWX'gc`WX'dfca dhY FYU_h]cbYb'gcf[h'X]Y': Yi Yfk Y\f'b]WXh'bi f'ZØf'CfXbi b[ž'gcbXYfb Ui WX'XUZØfž'XUgg'A YbgWXYb']b'NY]hYb'XYf'Bch'gWXbY```[Y\c`ZYb k]fX"

8 YhU1`a

6Ygi WXYb G]Y i bg Ui Z b!U["XY