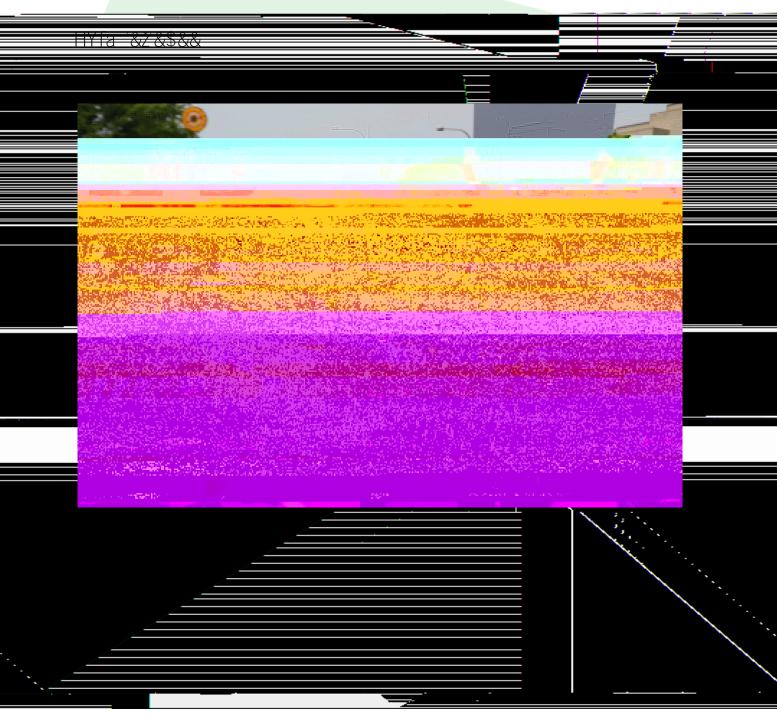
IEST5022

9bj]fcbaYbHJ``Dc`]WmUbX`DUfh]WjdUhjcb



IEST5022 // Term 2, 2022 // published at 09-05-2022 © UNSW Sydney, 2022

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7 cbj Ybcfg

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7 U``g`Zcf'di V`]WdUfh]WdUh]cb`]bž'UbX`]bXYYX'h\Y'XYa cWfUh]gUh]cb`cZzXYW]g]cb!a U]b[`\Uj Y'VYWca Y'U \U``a Uf `cZWcbhYa dcfUfmYbj]fcba YbhU``dc`]hWgzdc`]WnzUbX`dfUWfWY"`A UbmWcbhYa dcfUfmYbj]fcba YbhU`]qqiYq`UfY`WXUfUWfYf]qYX`Vm]bqhhi hjcbU``Wcaa]naYbhq`hc`ZcqhYf]b[`diV`]WYb[U[YaYbhUbX`dUfhjWjdUhjcb`]b XYWjg]cb!aU_]b['hc[Yh\Yf'k]h\ [fYUhYf'hfUbgdUfYbWn]b'h\Y XYd`cma YbhcZgWjYbhjZjWUbX'dc`]WnYI dYfhjgY" < ck Yj YfžXYgd]hY bcHUVY gi WWggYgžgi WX XYj Y cda Ybhg cZhYb ZJ] hc Yb \UbWY di V]Whfi ghUbX Vi]X a cfY'gcWjU``mfYgdcbg]j Y'UbX'fYgdcbg]V'Y'Zcfa g'cZYbj]fcba YbfU``dc`]WmUbX'fY[i`Uhjcb"'Cihg]XY'h\YgY bghhi hicbu``miqUbWicbYX`gdUWg`cZZcfaU``Wcbgi `HUhicbz'bYk 'di V`jWWc``YWij Yg'Z bWijcb'hc'WfYUhY`gdUWg cZdUff]WdUfjcb'h\UhUfY'fYg]gHJbhhc'dfcWfggYg'cZdc`]f]WJ``Wcgi fY'UbX'di V`]WWJdh fY"'H\YgY']bgi f[Ybh Zcfa Uhłobg WU```]bho'ei Yghłob'bofa Uhli Y Woa a]ha Ybhg'ho']bghlhi hłobu``UWWoi bhUV]`]hmiUbX'hfUbgdUfYbWhž k \]Y'U`gc'YbUWAb['bcjY`'dUfh]WidUhcfmWc``YWAjYg'g]hiUhYX'UWfcgg'U'a i `h]hiXY'cZgcWic!dc`]h]WU``g]hYg" K \]Y'Ub'UffUmcZYbj]fcbaYbHJ``_bck YX[Yg`-'Vch\ dfc[fYgg]jY'UbX'fYUWfjcbUfm-'cghY'Zcf'fYWc[b]hjcb UbX'dc`]hWU`dfca]bYbWYž]b'h]q'Wci fqY'mci 'k]``YI d`cfY'k Umq']b'k \]W\'h\Y'k cf_`cZUqqYa V`]b['X]j YfqY di V`]Wa'WUdUV`Y`cZhYahIZmb[`hc`h\Y`j]c`YbWY`cZYbj]fcba YbhU``X]afi dh]cbžUbX`cZWfUZhb[`fYa]`]YbhUbX Ya UbWdUhcfmiZ hi fYqži]qi]bX]WUhji YicZh YiYbXi f]b[Wca di `q]cbihck UfXidUfh]WdUhjcbi]biYbj]fcba YbHJ`]ggi Yg" Mci 'k]``Wcbg]XYf'h YgY']ggi Yg'h fci [\'Yb[U[Ya Ybhk]h Ybj]fcba YbhU`dUfh]W]dUh]cb'h YcfmUbX dfuWjWYžUbXih\fci [\`X]fYWiYb[U[Ya YbhcZU'fUb[Y`cZfYU'!k cfX'YI Ua d`Yg"'Nci `k]``YI Ua]bY`\ck `h\Y f][\hitc:dUfh]WdUhY^bYbj]fcbaYbHU^^]qqiYq'h\UhUZZYWfmci ~-WcX]ZYX^bh\Y`F]c'8YWUfUh]cb`-fU]qYq dfcZci bX'ei Yqhcbq'WcbWfb]b['WcbhYa dcfUfmXYa cWfUWhžfYdfYqYbfUhcbžYI dYfhqYžUbX'UWhj]qa "'Mci k]``XYjY`cdimcifickb'UXjcWUWng_]``g'UbX'dfUWNWU`'g_]``g'Zcf'XYg][b]b['UbX'WccfX]bUhb['Wcaaib]m dUfhWdUhcb UbX Yb[U[Ya Ybh]b]hUh] Yg"

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- %" Gmbh\Yg]gY`WcbhYa dcfUfmih\YcfmUbX`dfUWjWY`cZYbj]fcba YbhU``dUfhjWjdUhjcb
- &" 5dd`mi bXYfgHJbX]b[g`cZYbj]fcba YbHJ``dUfh]W]dUh]cb`hc`h\Y`UbU`mg]g`cZfYU`!k cf`X`YI Ua d`Yg`UbX WJgY`ghi X]Yg
- ' " 7 f]h]WU``mUfh]W `UhY `Vch` h.Y``]a]hUh]cbg UbX dchYbh]U`g cZYbj]fcba YbhU``dUfh]W]dUh]cb
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H\]gʻWcifgY`]bhfcXiWYgʻmci hcžUbX`Wf]h]WU``mYb[U[Ygʻmci k]h,žWiffYbhfYgYUfW.`UbX`dfUWf]WY`]b`h,Y`UfYU cZdiV`]WdUfh]W]dUh]cb`]b`WcbhYadcfUfmYbj]fcbaYbhU`dc`]h]WgʻUbX`dc`]Wh'`H\Y`WcifgY`ih]`gYg`X]gWigg]cbg UbX`YIYfW]gYgʻhc`dfcj]XY`fYU`!kcfX`YIUad`YgʻcZdiV`]WYb[U[YaYbhdfUWf]WY`UbX`YId`cfY`h\YcfYh]WU``UbX aYh\cXc`c[]WU``XYVUhYg`]b`h\Y`Z]Y`X`cZdiV`]WdUfh]W]dUh]cb`]b`VfcUXYf`]bgh]hih]cbU``UbX`W`hifU``WcbhYIhg"

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H\Y'a U'cf'd]YWYg'cZUggYgga YbhZcf'=9GH))\$\$`k]``VY'VUgYX'Ufci bX'lk c'a U'cf'WUgY'gh X]Yg'h\Uhk]``VY]bhfcXi WYX'Uh'h\Y'VY[]bb]b['cZh\Y'Wci fgY''

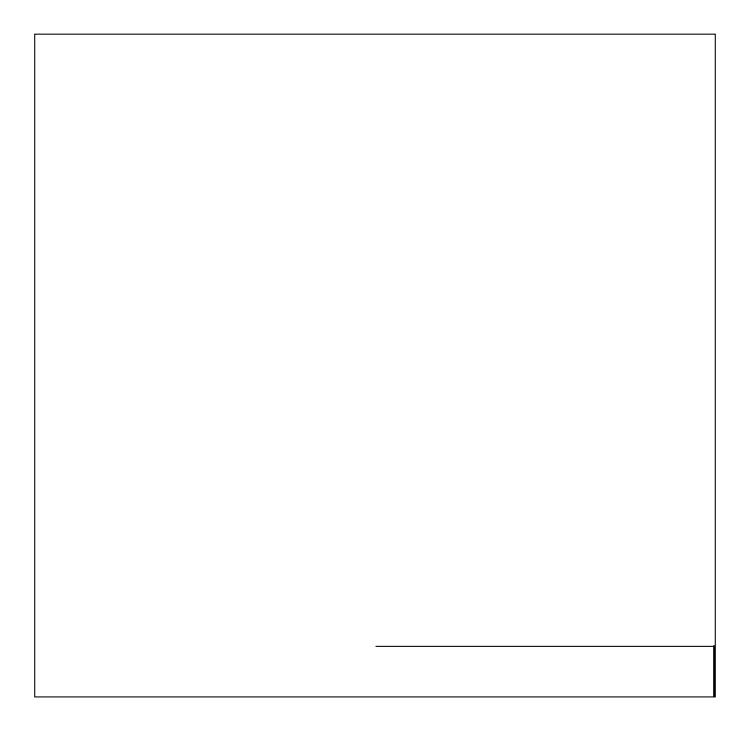
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ž \$\$"kcf g "VUgYX"UfcibX" cifgY" YU]b[



FYgci fWfg

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7 ci fgY`fYUX]b[g`k]```VY`Uj U]`UV`Y`j]U`A ccX`Y'''

FYWca a YbXYX FYgci fWfg

5XX]h]cbU``fYgci fWfg`UbX`fYUX]b[g`]bWi XY.

• 6fck bž'A "`&\$\$-.`

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

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

Zmci YbWci bhYf'U'dfcV'Ya 'k \Yb'UhYa dhjb['hc'gi Va]hmci f'Ugg][ba YbhN fci [\ 'Hi fb]hjbžd'YUgY hY'Yd\cbY'9I hYfbU'`Gi ddcfhcb'-',) '' ' '%cf'Ya U]`'h\Ya 'cb'YI hYfbU'hY'hgi ddcfh4 i bgk "YXi "Ui '"'Gi ddcfh \ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY_XUmg'UbX'-.\$\$Ua '-') .\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUfŁ'' Zmci UfY'i bUV'Y'hc'gi Va]hmci f'Ugg][ba YbhXi Y'hc'U'ZJi `hk]h\'Hi fb]hjb'mci 'a UmUdd`mZcf'Ub'YI hYbg]cbžVi hmci a i ghfYhU]b'mci f'hjW_Yhbi a VYf'Zfca '9I hYfbU'`Gi ddcfhfU'cb['k]h\ 'Ubmch\Yf'fY'Yj UbhXcW a YbhgŁhc]bWi XY'Ug'Yj]XYbWY hc'gi ddcfhmci f'YI hYbg]cb'Udd`]WUh]cb'' Zmci 'Ya U]`'9I hYfbU'`Gi ddcfhimci 'k]`` Ui hca UhjWU'`mfYWY]j Y'U'hjW_Yhbi a VYfžVi h]Zmci 'hY`Yd\cbY'mci 'k]``bYYX'hc'gdYWJZWU``mUg_'Zcf'cbY" Hi fb]hjb'U`gc'dfcj]XYg'i dXUhYg'cb'h\Y]f'gmghYa 'gfUh'g'cb'Hk]hYf"

; YbYfU``mž'UggYgga YbhHUg_g`a i ghVY`gi Va]HYX`Y`YWfcb]WU``mj]U`Y]H\Yf`Hi fb]h]b`cf`U`A ccX`Y Ugg][ba YbH'`=b`]bgHUbWfg`k \YfY`H\]g`]g`bchdcgg]V`Yž`]hk]```VY`gHUHYX`cb`mci f`Wci fgY**'**g`A ccX`Y`g]HY`k]H\ U`HYfbUh]j Y`gi Va]gg]cb`XYHU]`g"

: cf`]bZcfa Uh]cb`cb`\ck `hc`gi Va]hUgg][ba Ybhg`cb`]bY`j]U`A ccX`Y.`\hhdg.##gh XYbh'i bgk "YXi "Ui #\ck! gi Va]hUgg][ba Ybha ccX`Y

5WUXYa]W<cbYghmUbX^{*}D^{*}U[]Uf]ga

D`U[]Uf]ga `]g`i g]b[`h\Y`k cfXg`cf`]XYUg`cZch\Yfg`UbX`dfYgYbh]b[`h\Ya `Ug`mci f`ck b"`=hWUb`hU_Y`a Ubm Zcfa gžZca `XY`]VYfUhY`W\YUh]b[`hc`UWW]XYbhU``mWcdm]b[`Zca `U`gci fWY`k]h\ci hUW_bck `YX[Ya Ybh'

I BGK '[fci dg'd`U[]Uf]ga ']bhc 'h\Y'Zc``ck]b['WUhY[cf]Yg.

7 cdm]b[.1 g]b['th Y'gUa Y'cf'j Yfmig]a]`Uf'k cfXg'hc'th Y'cf][]bU`'hYI hcf']XYU'k]h\ci hUW_bck 'YX[]b['th Y gci fW'cf'i g]b['ei chUh]cb'a Uf_g"'H\]g']bWi XYg'Wcdm]b['a UhYf]U`gž']XYUg'cf'WcbW'dhg'Zfca 'U'Vcc_ž'Ufh]WYž fYdcfhicf'ch\Yf'k f]hhyb'XcW a Ybhž'dfYgYbhUh]cbž'Wca dcg]h]cbž'Ufhk cf_ž'XYg][bž'XfUk]b[ž'W]fW]hfmž'Wca di hYf dfc[fUa 'cf'gcZtk UfYž'k YVg]hYž']bhYfbYhž'ch\Yf'Y'YWfcb]WfYgci fWFžcf'Ubch\Yf'dYfgcbfig'Ugg][ba Ybhk]h\ci h Uddfcdf]UhY'UW_bck 'YX[Ya Ybh'

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5WUXYa]W=bZcfaUh]cb

8 i Y'hc'Yj c'j]b['UXj]WY'VmBGK '<YU'h\ž'ghi XYbhg'a i gh'W\YW_'Zcf'i dXUHYX']bZcfa Uh]cb'fY[UfX]b['cb`]bY 'YUfb]b['Zcf'U``5fhgž'8Yg][b'UbX'5fW\]hYWhi fY'Wci fgYg'h\]g'hYfa 'fj]U'A ccX`Y'cf'Wci fgY']bZcfa Uh]cb dfcj]XYX''Ł

: cf^{*}YggYbhJU^{**}gh XYbh^{*}]bZcfa UhJcb^{*}fY^{*}UhJb[^{**}hc.

- fYei Yghg Zcf Yl hYbg]cb/
- `UHY'gi Va]gg]cbg'[i]XY`]bYg/
- fYj]Yk 'cZa Uf_g/
- I BGK '<YU`h\`UbX'GUZYhmidc`]WjYg/
- YI Ua]bUh]cb dfcWYXi fYg/
- gdYWJU`Wcbg]XYfUh]cb`]b`h\Y`Yj YbhcZ]``bYgg`cf`a]gUXj Ybh fY/
- gh XYbhYei]hmUbX`X]gUV]`]hm/
- UbX'ch\Yf'YggYbh]U``UWUXYa]W]bZcfa Uh]cbž'gYY

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⊨a U[Y[·]7fYX]h

D\chc⁻Vm<u>H\Y⁻7`]a UhY⁻FYU`]hmDfc⁻YW</u>hcb⁻L<u>bgd`Ug\</u>"⁻