|  | A | B | C | D | E | F | G | H |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | [Student's Name] |  |  |  |  |  |  |  |
| 2 | FIL 260 - Trefzger |  |  |  |  |  |  |  |
| 3 | Monthly Mortgage Loan Payments |  |  |  |  |  |  |  |
| 4 | 5-25 Hybrid Loan, 30 Years |  |  |  |  |  |  |  |
| 5 |  | Note: All monthly | y payments in y | ears $1-5$ will be | , all based on the m | onthly interest rate computed in cell E14. |  |  |
| 6 |  | All monthly paym | ments in year 6 | will be equal, all ba | d on the monthly inte | rest rate computed in cell E16. |  |  |
| 7 |  | All monthly paym | ments in year 7 | will be equal, all ba | d on the monthly inte | rest rate computed in cell E18. |  |  |
| 8 |  | Monthly paymen | ats in each of ye | ears $8-30$ will likely | differ, based on year-b | by-year prevailing monthly interest rates. |  |  |
| 9 |  | But here we com | mpute all of the | year 8-30 monthly | ayments with the same | e monthly interest rate expected in year 7 . |  |  |
| 10 |  |  |  |  |  |  |  |  |
| 11 |  |  | Annual |  | Monthly | Monthly |  |  |
| 12 |  | Amortization | Interest | Amortization | Interest | Payment Year 1-5 |  |  |
| 13 | Amount | Period in | Rate (APR) | Period in | Rate (APR $\div 12$ ) | based on |  |  |
| 14 | Borrowed | Years | Years 1-5 | Months | Years 1-5 | standard formula |  |  |
| 15 | 675000 | 30 | 0.057 | $=\mathrm{B} 15 * 12$ | =C15/12 | $=\mathrm{E} 15 /\left(1-(1 /(1+\mathrm{E} 15))^{\text {- }} \mathrm{D} 15\right)^{*} \mathrm{~A} 15$ |  |  |
| 16 |  |  | Year 6 |  | Year 6 | Monthly Payment Year 6 (as computed below) |  |  |
| 17 |  |  | 0.063 |  | = C17/12 | =F88 |  |  |
| 18 |  |  | Year 7 |  | Year 7 | Monthly Payment Year 7 (as computed below) |  |  |
| 19 |  |  | 0.066 |  | =C19/12 | =F100 |  |  |
| 20 |  |  |  |  |  |  |  |  |
| 21 |  |  |  |  |  | Monthly |  |  |
| 22 |  |  |  |  |  | Payment |  |  |
| 23 |  |  |  |  |  | based on |  |  |
| 24 |  |  |  |  | Amount Owed | remaining | Principal | Ending |
| 25 |  | Payments | Beginning | Plus | Before | months and | Portion of | Principal |
| 26 | Month | Remaining | Prin Bal. | Interest | Payment | balance | Payment | Balance |
| 27 | 0 |  |  |  |  |  |  | =A15 |
| 28 | =A $27+1$ | =D15 | = H 27 | =SES15*C28 | $=\mathrm{C} 28+\mathrm{D} 28$ | $=$ SES $15 /\left(1-(1 /(1+\text { SES } 15))^{\wedge} \text { B28 }\right)^{*} \mathrm{C} 28$ | $=\mathrm{F} 28-\mathrm{D} 28$ | =C28-G28 |
| 29 | =A $28+1$ | =B28-1 | = H 28 | =SES15*C29 | =C29+D29 | $=$ SES $15 /\left(1-(1 /(1+\text { SES } 15))^{\text {B }} \text { 29 }\right)^{*}$ C29 | =F29-D29 | =C29-G29 |
| 30 | =A29+1 | =B29-1 | = H 29 | =SES15*C30 | $=\mathrm{C} 30+\mathrm{D} 30$ | $=$ SES $15 /\left(1-(1 /(1+\text { SES } 15))^{\wedge} \mathrm{B} 30\right)^{*} \mathrm{C} 30$ | =F30-D30 | =C30-G30 |
| 31 | =A30 +1 | = B30-1 | = H 30 | =SES15*C31 | =C31+D31 | $=$ SES $15 /\left(1-(1 /(1+\text { SES } 15))^{\wedge}\right.$ B31)*C31 | =F31-D31 | =C31-G31 |
| 32 | =A31+1 | =B31-1 | = H 31 | $=$ SES $15 *$ C32 | $=\mathrm{C} 32+\mathrm{D} 32$ | $=$ SES $15 /\left(1-(1 /(1+\text { SES } 15))^{\text {® }} \text { B } 32\right)^{*} \mathrm{C} 32$ | =F32-D32 | =C32-G32 |
| 33 | $=\mathrm{A} 32+1$ | = $332-1$ | = H 32 | =SES $15 *$ C33 | =C33+D33 | $=$ SES $15 /\left(1-(1 /(1+\text { SES } 15))^{\wedge} \text { B } 33\right)^{*}$ C33 | =F33-D33 | =C33-G33 |

Continue pasting down; note need to change interest rates in months 61-72 and 73-360 in both column $F$ and column $D$ (video shows making the change in column F but does not mention changing column D ; that is an essential step)

| 86 | =A85 +1 | = ${ }^{8} 85-1$ | = H 85 | =\$E\$15*C86 | $=\mathrm{C} 86+\mathrm{D} 86$ | $=\$ \mathrm{E} 15 /\left(1-\left(1 /(1+\$ \mathrm{E} \$ 15)^{\wedge} \text { B86 }\right)^{*} \mathrm{C} 86\right.$ | =F86-D86 | =C86-G86 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 87 | =A86+1 | =B86-1 | = H 86 | =\$E\$15*C87 | =C87+D87 | $=\$ \mathrm{E} 15 /\left(1-(1 /(1+\$ E \$ 15))^{\wedge} \mathrm{B} 87\right)^{*} \mathrm{C} 87$ | =F87-D87 | =C87-G87 |
| 88 | =A87+1 | =B87-1 | = H 87 | $=\$ \mathrm{E}$ \$17* ${ }^{\text {C } 88}$ | =C88+D88 | $=\$ E \$ 17 /\left(1-(1 /(1+\$ E \$ 17))^{\wedge} \mathrm{B} 88\right)^{*} \mathrm{C} 88$ | =F88-D88 | =C88-G88 |
| 89 | =A88+1 | =B88-1 | =H88 | $=\$ \mathrm{E} \$ 17 * \mathrm{C} 89$ | =C89+D89 | $=\$ \mathrm{E}$ \$17/(1-(1/(1+\$E\$17) $\left.{ }^{\wedge} \mathrm{B} 89\right)^{*} \mathrm{C} 89$ | =F89-D89 | =C89-G89 |
| 90 | =A89+1 | = B89-1 | = H 89 | $=\$ \mathrm{E} \$ 17 * \mathrm{C} 90$ | =C90+D90 | $=\$ \mathrm{E}$ 17/(1-(1/(1+\$E\$17) $\left.{ }^{\wedge} \mathrm{B} 90\right)^{*} \mathrm{C} 90$ | =F90-D90 | =C90-G90 |
| 91 | =A90+1 | =B90-1 | = H 90 | $=\$ \mathrm{E} \$ 17^{*} \mathrm{C} 91$ | =C91+D91 | $=\$ \mathrm{E}$ \$17/(1-(1/(1+\$E\$17) $\left.{ }^{\wedge} \mathrm{B} 91\right)^{*} \mathrm{C} 91$ | =F91-D91 | =C91-G91 |
| 92 | =A91+1 | =B91-1 | = H 91 | $=\$ \mathrm{E} \$ 17 * \mathrm{C} 92$ | =C92+D92 | $=\$ \mathrm{E}$ \$17/(1-(1/(1+\$E\$17) $\left.{ }^{\wedge} \mathrm{B} 92\right)^{*} \mathrm{C} 92$ | =F92-D92 | =C92-G92 |
| 93 | =A92+1 | =B92-1 | = H 92 | $=\$ \mathrm{E} \$ 17 * \mathrm{C} 93$ | =C93+D93 | $=\$ \mathrm{E}$ 17/(1-(1/(1+\$E\$17) $\left.)^{\wedge} \mathrm{B} 93\right)^{*} \mathrm{C} 93$ | =F93-D93 | =C93-G93 |
| 94 | =A93+1 | =B93-1 | = H 93 | $=\$ \mathrm{E}$ \$17* ${ }^{\text {C } 94}$ | =C94+D94 | $=\$ \mathrm{E}$ \$17/(1-(1/(1+\$E\$17) $\left.{ }^{\wedge} \mathrm{B} 94\right)^{*} \mathrm{C} 94$ | =F94-D94 | =C94-G94 |
| 95 | =A94+1 | =B94-1 | = H 94 | =\$E\$17*C95 | =C95+D95 | $=\$ \mathrm{E}$ 17/(1-(1/(1+\$E\$17) $\left.{ }^{\wedge} \mathrm{B} 95\right)^{*} \mathrm{C} 95$ | =F95-D95 | =C95-G95 |
| 96 | =A95+1 | =B95-1 | = H 95 | $=\$ \mathrm{E}$ \$17* ${ }^{\text {C } 96}$ | =C96+D96 | $=\$ \mathrm{E}$ \$17/(1-(1/(1+\$E\$17) $\left.)^{\wedge} \mathrm{B} 96\right)^{*} \mathrm{C} 96$ | =F96-D96 | =C96-G96 |
| 97 | =A96+1 | =B96-1 | = H 96 | $=\$ \mathrm{E}$ \$17* ${ }^{\text {C } 97}$ | =C97+D97 | $=\$ \mathrm{E} 17 /\left(1-\left(1 /(1+\$ \mathrm{E} \$ 17)^{\wedge} \mathrm{B} 97\right)^{*} \mathrm{C} 97\right.$ | =F97-D97 | =C97-G97 |
| 98 | =A97+1 | =B97-1 | = H 97 | $=\$ \mathrm{E}$ \$17* ${ }^{\text {C }}$ 98 | =C98+D98 | $=\$ \mathrm{E}$ 17/(1-(1/(1+\$E\$17) $\left.{ }^{\wedge} \mathrm{B} 98\right)^{*} \mathrm{C} 98$ | =F98-D98 | =C98-G98 |
| 99 | =A98+1 | =B98-1 | =H98 | $=\$ \mathrm{E} \$ 17 * \mathrm{C} 99$ | =C99+D99 | $=\$ \mathrm{E}$ \$17/(1-(1/(1+\$E\$17) $\left.{ }^{\wedge} \mathrm{B} 99\right)^{*} \mathrm{C} 99$ | =F99-D99 | =C99-G99 |
| 100 | =A99+1 | =B99-1 | = H 99 | $=\$ \mathrm{E} \$ 19 * \mathrm{C} 100$ | =C100+D100 | $=\$ \mathrm{E}$ 19/(1-(1/(1+\$E\$19)) ${ }^{\text {B }}$ 100 $)^{*} \mathrm{C} 100$ | =F100-D100 | =C100-G100 |
| 101 | =A100+1 | =B100-1 | = H 100 | $=\$ \mathrm{E} \$ 19 * \mathrm{C} 101$ | $=$ C101 + D101 | $=\$ \mathrm{E}$ 19/(1-(1/(1+\$E\$19))^B101)*${ }^{\text {C }}$ C101 | =F101-D101 | =C101-G101 |
| 102 | $=\mathrm{A} 101+1$ | =B101-1 | = H 101 | $=\$ \mathrm{E} \$ 19 * \mathrm{C} 102$ | =C102+D102 | $=\$ \mathrm{E}$ 19/(1-(1/(1+\$E\$19))^B102)*C102 | =F102-D102 | =C102-G102 |
| 103 | $=\mathrm{A} 102+1$ | =B102-1 | = H 102 | $=\$ \mathrm{E} \$ 19 * \mathrm{C} 103$ | =C103+D103 | $=\$ \mathrm{E}$ 19/(1-(1/(1+\$E\$19))^B103)*C103 | =F103-D103 | =C103-G103 |
| 104 | =A103+1 | =B103-1 | = H 103 | $=\$ \mathrm{E} \$ 19 * \mathrm{C} 104$ | $=\mathrm{C} 104+$ D104 | $=\$ \mathrm{E}$ \$19/(1-(1/(1+\$E\$19))^B104)*C104 | =F104-D104 | =C104-G104 |

## Continue pasting down

| 377 | =A376+1 | =B376-1 | = H 376 | =SES19*C377 | $=\mathrm{C} 377+$ D377 | $=$ SES $19 /\left(1-(1 /(1+\text { SES } 19))^{\wedge}\right.$ B377)* ${ }^{\text {C }} 377$ | =F377-D377 | =C377-G377 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 378 | =A377+1 | =B377-1 | = H 377 | =SES19*C378 | $=C 378+$ D378 | $=$ SES $19 /\left(1-(1 /(1+\text { SES } 19))^{\wedge} \text { B } 378\right)^{*} \mathrm{C} 378$ | =F378-D378 | =C378-G378 |
| 379 | =A378+1 | =B378-1 | = H 378 | =SES19*C379 | $=\mathrm{C} 379+$ D379 | $=$ SES $19 /\left(1-(1 /(1+\text { SES } 19))^{\wedge}\right.$ B379)*${ }^{\text {C }}$ ( 379 | =F379-D379 | =C379-G379 |
| 380 | =A379+1 | =B379-1 | = H 379 | =SES19*C380 | =C380+D380 | $=$ SES $19 /\left(1-(1 /(1+\text { SES } 19))^{\wedge} \text { B } 380\right)^{*} \mathrm{C} 380$ | =F380-D380 | =C380-G380 |
| 381 | =A380+1 | =B380-1 | = H 380 | =SE\$19*C381 | =C381+D381 | $=$ SES $19 /\left(1-(1 /(1+\text { SES } 19))^{\wedge}\right.$ B381)* ${ }^{\text {C }}$ C381 | =F381-D381 | =C381-G381 |
| 382 | =A381+1 | =B381-1 | =H381 | =SES19*C382 | =C382+D382 | $=$ SES $19 /\left(1-(1 /(1+\text { SES } 19))^{\wedge}\right.$ B382)* ${ }^{\text {C }}$ [ 382 | =F382-D382 | =C382-G382 |
| 383 | =A382+1 | =B382-1 | =H382 | =SES19*C383 | =C383+D383 | $=$ SES $19 /\left(1-(1 /(1+\text { SES } 19))^{\text {- }} \text { 3 } 383\right)^{*} \mathrm{C} 383$ | =F383-D383 | =C383-G383 |
| 384 | =A383+1 | =B383-1 | = H 383 | =SES19*C384 | =C384+D384 | $=$ SES 19/(1-(1/(1+SES19) $)^{\text {® }}$ B 384$)^{*}$ C 384 | =F384-D384 | =C384-G384 |
| 385 | =A384+1 | =B384-1 | = H 384 | =SES19*C385 | =C385+D385 | $=$ SES $19 /\left(1-(1 /(1+\text { SE\$ } 19))^{\wedge} \text { B385 }\right)^{*} \mathrm{C} 385$ | =F385-D385 | =C385-G385 |
| 386 | =A385+1 | =B385-1 | = H 385 | =SES19*C386 | =C386+D386 | $=$ SES $19 /\left(1-(1 /(1+\text { SES } 19))^{\wedge}\right.$ B386)*${ }^{*}$ C386 | =F386-D386 | =C386-G386 |
| 387 | =A386+1 | =B386-1 | = H 386 | =SE\$19*C387 | =C387+D387 | $=$ SES $19 /\left(1-(1 /(1+\text { SE\$ } 19))^{\wedge}\right.$ B387)*C387 | =F387-D387 | =C387-G387 |
| 388 |  |  |  |  |  |  |  |  |
| 389 |  |  |  | =SUM(D28:D387) |  | $=$ SUM (F28-F387) | $=$ SUM(G28:G387) |  |
| 390 |  |  |  | Total |  | Total | Total |  |
| 391 |  |  |  | Interest |  | Payments | Principal |  |
| 392 |  |  |  | Paid |  | Made | Repaid |  |

