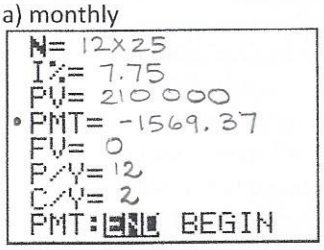
HOMEWORK:

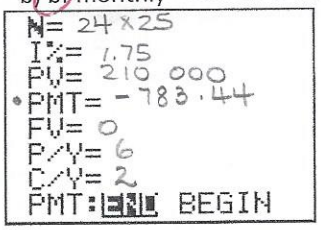
Use the TVM Solver to answer the following questions.

1. Meghan has a $210 000 mortgage at 7.75% amortized over 25 years. Determine her regular payment if payments are made:

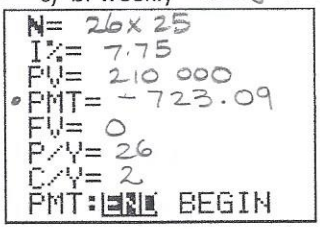
a) monthly



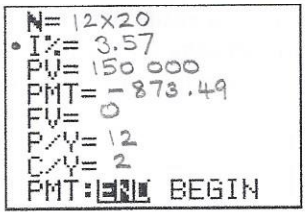
b) bi-monthly (semi) twice a month



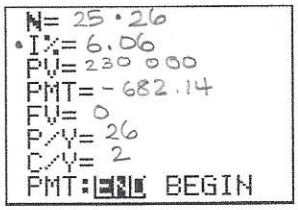
c) bi-weekly every 2 weeks



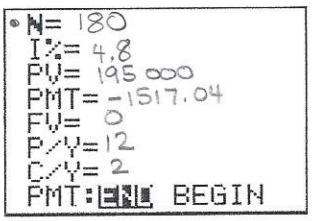
2. Vicki is making monthly payments of $873.49 to pay off a $150 000 mortgage amortized over 20 years.
What annual rate of interest is she being charged?



3. Thomas is paying $682.14 every two weeks to pay off his $230 000 mortgage over 25 years.
Determine the annual rate of interest on his mortgage.



4. Carrie is paying $1517.04 per month on her $195 000 mortgage. If she is being charged 4.8%/a, how many years will it take her to pay off her mortgage?

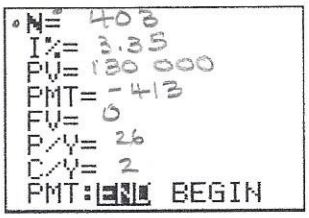


$n = t \cdot \#\text{ of payments}$

$t = \frac{180}{12}$

$t = 15$ years

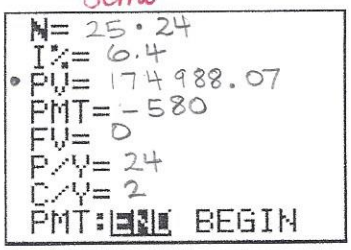
5. How many years will it take George to pay off a $130 000 mortgage at 3.35% if he can afford a payment of $413 every two weeks?



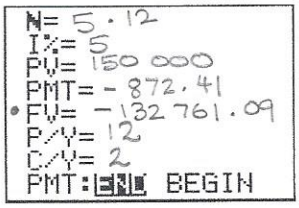
$t = \frac{403}{26}$

$t = 15.5$ years

6. Determine the amount of a mortgage at 6.4%/a over 25 years, if the bi-monthly (semi) payment is $580.

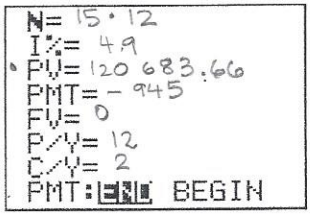


7. Sarah has been making monthly mortgage payments of $872.41 on her $150 000 mortgage with an annual interest rate of 5%. Determine how much she will owe after 5 years by calculating the future value of the mortgage at that time.

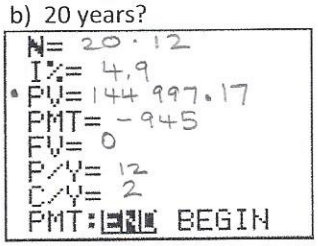


8. Jake and Louise want to buy a house and have determined that they can afford a monthly payment of $945. If interest is 4.9%/a, what is the maximum amount that they should borrow, if their mortgage is amortized over:

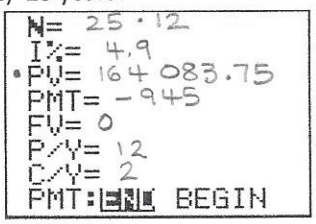
a) 15 years?



b) 20 years?



c) 25 years?



SOLUTIONS:

1. a) $1 569.37/mo, b) $783.44/bi-mo, c) $723.09/bi-wk 2. 3.57% 3. 6.06% 4. 15 years 5. 15 ½ years 6. $174 988.07
7. $132 761.09 8. a) $120 683.66, b) $144 997.17, c) $164 083.75