Week in Review #10

1. \( N = 4 \times 7; I = 6; PV = -900; FV = 7000; P/Y=C/Y=4; \) Solve for PMT; Answer: $150.77

2. (a) \( N = 9 \times 12; I = 5.6; PV = -100; PMT = -20; P/Y=C/Y=12; \) Solve for FV; Answer: $2965.58
   (b) $705.58

3. (a) \( N = 12 \times 4; I = 7; PV = 0; PMT = -50; P/Y=C/Y=12; \) Solve for FV; Answer: $2760.46
   (b) \( N = 12 \times 6; I = 7; PV = -2760.46; PMT = -100; P/Y=C/Y=12; \) Solve for FV; Answer: $13112.28

4. (a) \( N = 20; I = 7; PV = -1500; PMT = -250; P/Y=C/Y=12; \) Solve for FV; Answer: $6972.07
   (b) Ballance at the end of the 19th payment = $6683.09
      interest = 6972.07-6683.09-250 = $38.98
   (c) ballance at the end of 3rd year = 11,831.91
      ballance at the end of the 2nd year = 8,144.97
      payments made during the 3rd year = 12 * 250 = 3000
      interest = 11831.91-8144.97-3000 = $686.94

5. (a) \( N = 7 \times 4; I = 5.8; PV = 0; FV = 120000; P/Y=C/Y=4; \) Solve for PMT; Answer: $3505.00
   (b) 120000-3505\times 7 \times 4 = $21860

6. (a) \( N = 12 \times 4; I = 12.5; PMT =0; FV = 10000; P/Y=C/Y=4; \) Solve for PV; Answer: $2283.13
   (b) \( N = 12 \times 4; I = 12.5; PV = -700; FV = 10000; P/Y=C/Y=4; \) Solve for PMT; Answer: $64.11

7. (a) \( N = 5 \times 12; I = 14.5; PV = 4500; FV = 0; P/Y=C/Y=12; \) Solve for PMT; Answer: $105.88
   (b) \( N = 3 \times 12; I = 14.5; PV = 4500; FV = -1100; P/Y=C/Y=12; \) Solve for PMT; Answer: $130.32

8. (a) \( N = 6 \times 12; I = 0.75; PMT = 60; FV = 0; P/Y=C/Y=12; \) Solve for PV; Answer: $4222.95
   (b) \( 6 \times 12 \times 60-42222.95 = 97.05 \)

9. first figure out the ballance at the end of the 30 years
   \( N = 30 \times 12; I = 8; PV = 0; PMT = 125; P/Y=C/Y=12; \) Solve for FV; Answer: $186294.93
   Now see what type of payments this will generate.
   \( N = 18 \times 12; I = 8; PV = -186294.93; FV = 0; P/Y=C/Y=12; \) Solve for PMT; Answer: $1630.01

10. (a) first figure out how much they can afford to borrow.
    \( N = 30 \times 12; I = 7.2; PMT = 800; FV = 0; P/Y=C/Y= 12; \) Solve for PV; Answer: $117857.09
    amount borrowed + deposit = price of the house
    \( 117857.09 + 30000 = $147857.09 \)
(b) \( N = 30 \times 12; \ I = 7.2; \ PV = 109000; \ FV = 0; \ P/Y=C/Y= 12; \) Solve for \( PMT \); Answer: 
\( \$739.88 \)

(c) amortization table.

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<tr>
<th>period</th>
<th>interest owed</th>
<th>payment</th>
<th>amt. toward principal</th>
<th>outstanding principal</th>
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<td>—</td>
<td>—</td>
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(d) first find how much is owed after 12 years.
\( N = 12 \times 12; \ I = 7.2; \ PV = 109000; \ PMT = -739.88; \ P/Y=C/Y= 12; \) Solve for \( FV \); Answer: \( \$89440.62 \)

Equity = value of the object - amount still owed

Equity = 139000-89440.62 = \( \$49559.38 \)

11. downpayment = 0.15*114000 = 17,100

(a) \( N = 12 \times 12; \ I = 6.45; \ PV = 96900; \ FV = 0; \ P/Y=C/Y=12; \) Solve for \( PMT \); Answer: \( \$968.32 \)

(b) first find how much is owed after 7 years.
\( = 7 \times 12; \ I = 6.46; \ PV = 96900; \ PMT = -968.32; \ P/Y=C/Y= 12; \) Solve for \( FV \); Answer: \( \$49548.57 \)

Equity = value of the object - amount still owed

Equity = 114,000-49,548.57 = \( \$64,451.43 \)

12. (a) \( N = 3 \times 12; \ I = 6.3; \ PMT = -350; \ FV = -4500; \ P/Y=C/Y=12; \) Solve for \( PV \); \( PV = \$15,180.49 \)

Answer: \( 15,180.49 + 3000 = \$18,180.49 \)

(b) \( I = 6.3; \ PV = 15180.49; \ PMT = -350; \ FV = 0; \ P/Y=C/Y=12; \) Solve for \( N \); \( N = 49.3465 \)

There will be a total of 50 payments(49 full payments and 1 partial payment).

number of payments still left is 50-36 = 14.