

21. *Evaluating a Loan Request* The Rosens found a house selling for \$113,500. The taxes on the house are \$1200 per year, and insurance is \$320 per year. They are requesting a conventional loan from the local bank. The bank is currently requiring a 15% down payment and 3 points, and the interest rate is 10%. The Rosen's gross monthly income is \$4750. They have more than 10 monthly payments remaining on a car, a boat, and furniture. The total monthly payments for these items is \$420. Their bank will approve a loan that has a total monthly mortgage payment of principal, interest, property taxes, and homeowners' insurance that is less than or equal to 28% of their adjusted monthly income.

a) Determine the required down payment.

$$.15(113,500) = 17025$$

b) Determine the cost of the 3 points.

$$113,500 - 17025 = 96475 \text{ (pts)} \quad (.03) = 2894.25$$

c) Determine 28% of their adjusted monthly income.

$$4750 - 420 = 4330 \text{ (pts)} \quad (.28) = \boxed{1212.40}$$

d) Determine the monthly payments of principal and interest for a 20-year loan.

$$\frac{96475}{1000} \times 9.65 = 930.98 \text{ P/I}$$

e) Determine their total monthly payment, including homeowners' insurance and taxes.

$$\frac{1200}{12} + \frac{320}{12} + 930.98 = 1057.65$$

f) Determine whether the Rosens qualify for the 20-year loan.

Yes

g) Determine how much of the first payment on the loan is applied to the principal.

$$I = 96475 \text{ (pts)} \quad (.10) \left(\frac{1}{12}\right) = -803.96 \text{ I}$$

$$\boxed{127.02} \text{ P}$$

Mortgage P