

# Math 112 - Quiz 13

November 5, 2018

Name key

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary. This quiz is worth 5 points. YOU MUST WORK INDIVIDUALLY.

1. (5 points) A house sells for \$145,000 and a 15% down payment is made. The remaining amount is borrowed at 7% compounded monthly for 25 years.

(a) How much is the down payment?

$$15\% \text{ of } 145,000 = (0.15)(145,000) \\ = \$21,750.00$$

(b) How much is the loan amount?

$$145,000 - 21,750 \\ = \$123,250.00$$

(c) Find the monthly payment.

$$R = \frac{123,250 * (0.07/12)}{(1 - (1 + 0.07/12)^{-12 * 25})} = \$871.11$$

(d) What is the total amount paid for the loan?

$$871.11 \times 12 \times 25 = \$261,333.00$$

(e) How much interest is paid on the loan?

$$261,333 - 123,250 = \$138,083.00$$