

Final Exam Review – Unit 6

Name: _____

Date: _____

1) Jim makes \$72,100 per year and wants to budget 20% of his salary toward his monthly housing payments. Find this monthly payment.

2) Doyle makes \$13.75 per hour and works 36 hours a week. He pays 18% of his gross earnings in federal and state taxes and saves 9% of his monthly gross income. He is considering renting an apartment that will cost \$900 per month. Based on his expenses, can he make the monthly payments?

3) The length of a room is 23 ft. When using a $\frac{1}{4}$ inch = 1 foot scale, what would be the length of the wall on its floor plan?

4) The conference room at Raymond's Condo Complex measures 48ft x 38ft.

a) New flooring is being installed and costs \$2.50 per square foot. Use the area formula given below to determine the total cost.

$$\text{Area} = \text{length} \times \text{width}$$

b) Find the volume of the conference room if it has 12 foot ceilings.

$$\text{Volume} = \text{length} \times \text{width} \times \text{height}$$

- 5) Dwight is making garden in his backyard in the shape of a regular decagon. He wants to make it so the length of each side is 7 feet and the apothem length is 8 feet. Use the area formula below to determine the area of the garden.

$$\text{Area} = 0.5 \times \text{apothem} \times \text{length of each side} \times \text{number of sides}$$

- 6) The main conference room at a town building measures 52 feet by 42 feet and has a 10-foot ceiling. It is fairly well insulated (level 9) and faces the east side of the building. Use the formula given below to determine the correct size of the air conditioner that should be purchased for the room.

$$\text{BTU rating} \approx \frac{w \cdot h \cdot i \cdot l \cdot e}{60}$$

w: width of room

h: height of room

i: level of insulation

l: length of room

e: exposure

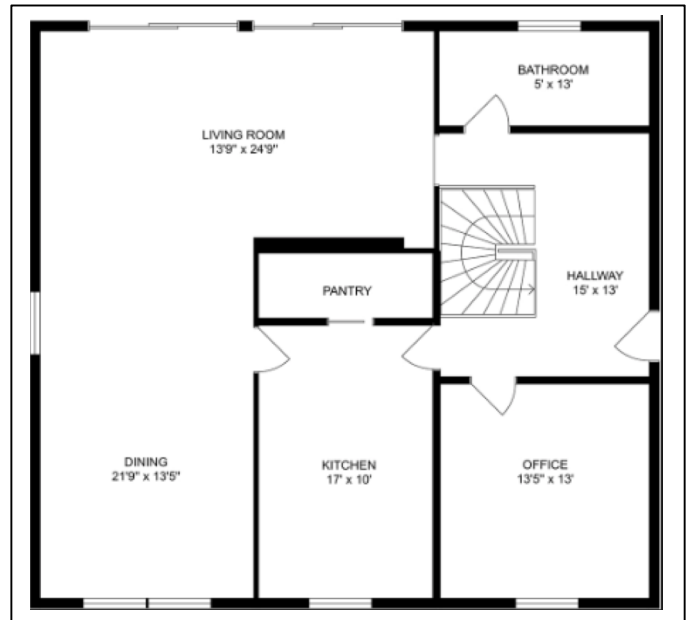
north: 16 east: 17

south: 18 west: 20

7) Holly wants to put hardwood floors the living room and dining room of her apartment whose floor plan is shown below.

a) What is the total amount of flooring she will need?

$$\text{Area} = \text{length} \times \text{width}$$



b) The flooring she wants costs \$2.75 per square foot. How much will it cost her to re-floor these two rooms?

8) Kevin and Marissa are buying a \$560,000 home and made a 16% down payment.

a) How much money did they borrow for their loan?

b) They have been approved for a 5.2% APR mortgage. What will be their annual interest?

c) What will be their daily interest?

d) If they made their down payment on June 12th, how much will be charged in prepaid interest at the closing?

e) If closing costs are usually between 2% and 7% of the original cost of the home, what might Matt and Melissa expect to pay in total at the closing?

9) Last year, Brad paid a monthly condo maintenance fee of \$250. Twelve percent of this fee covered his monthly property taxes.

a) What is his monthly property tax for the condo?

b) How much did John pay last year in property taxes on his condo?

10) Erica is 41 years old and plans to open a retirement account. She wants to have \$500,000 in the account when she retires at age 67. Use the formula below to determine how much must she deposit each month into an account with an APR of 2.7% to reach her goal.

$$P = \frac{B \left(\frac{r}{n} \right)}{\left(1 + \frac{r}{n} \right)^{nt} - 1}$$

B = balance at end of investment period

P = periodic deposit amount

r = annual interest rate (as a decimal)

n = number of times interest is compounded annually

t = length of investment in years

11) Jim makes \$73,000 per year. The company allows employees to make contributions to the 401k to a maximum of 14% of their salary. The maximum allowable contribution to any 401k for his company is \$7,100.

a) What is 14% of Jim's salary?

b) Using your answer from part a, what is the maximum amount that Jim is allowed to contribute to his 401k?

12) Pam wants to check how many Social Security credits she received for 2017. She finds that to earn a credit in 2017, she needed to earn \$1,300. She worked part-time all year and earned \$400 per month.

a) How much money did she earn for the whole year?

b) How many credits did she earn that year?

13) Oscar has a universal life insurance policy with a face value of \$350,000. The current cash value of the policy is \$9,400. If the premium is \$90 per month, for how many months can the cash value be used to pay the premium?