Computing the Monthly Rental Charge

19-1

You might **rent** or **lease** your business space, usually on an annual basis. This is the amount you pay the building owner to occupy his space. The owner may charge you a certain rate per square foot of space, which will determine the amount you pay.

Example

Find the monthly rental charge.

Opal Productions rents a portion of a building owned by Gem Studios. The floor plan for Opal's office space measures 100 feet by 125 feet. Gem charges an annual rate of $12.50 per square foot. What is Opal's monthly rental charge, rounded to the nearest whole dollar?

1. Find the area of the office space.
   Area = Length × Width
   Area = 100 ft × 125 ft = 12,500 square ft

2. Find the monthly rental charge
   Monthly Rental Charge = (Annual Rate × Number of Square Feet) ÷ 12
   ($12.50 × 12,500) ÷ 12 = **$13,021 monthly rental charge**

Practice

Find the number of square feet and the monthly rental charge. Round to the nearest whole dollar.

	Dimensions	Number of Square Feet	Annual Rate per Square Foot	Monthly Rental Charge
1.	17 ft by 20 ft	a.	$ 9.00	b.
2.	25 ft by 40 ft	a.	8.50	b.
3.	27.5 ft by 50 ft	a.	12.25	b.
4.	22.5 ft by 32.5 ft	a.	11.75	b.

5. Perfect Pizzas rents restaurant space at a local strip mall. The space measures 50 feet by 60 feet. It pays $9.50 per square foot plus 1.5 percent of its gross sales. Last year its gross sales totaled $500,000. What was Perfect Pizzas' monthly rent?

6. Lucinda and Kyle Abbot can rent a 3,200 square foot beach home at a weekly rate of $1.50 a square foot or a 2,500 square foot condo for the weekly rate of $2.00 a square foot. Which is the cheaper deal?

7. **Standardized Test Practice** Holly Holidays wants to rent retail space at a mall for the holiday season. A prime space measures 25 feet by 20 feet and has an annual cost of $15 per square foot. An upper level space measures 25 feet by 25 feet and has an annual cost of $11.50 per square foot. How much will Holly Holidays save per month by renting the upper level space?

   A. $312.50   **B.** $145.83   **C.** $26.04   **D.** $2.50

Student _____ Date _____ Period _____

19-2 Computing the Total Building Maintenance Charge

If you own the building your business is in, you need people to clean and maintain it. The total cost of a maintenance job usually includes a **labor charge,** which is the cost of paying the people who do the job. It is calculated on an hourly basis per person. The cleaning and maintenance charge may also be based on square footage.

Example

Find the total charge.

Opal Productions hired Home Flooring to install new hardwood floors. Two workers each worked the following hours: 8 hours Friday, 8 hours Saturday, and 6 hours Sunday. They were paid time-and-a-half for Saturday and double time for Sunday. Their usual rate is $20 per hour each. The flooring costs $2 per square foot. The office space measures 30 feet by 20 feet. What is the total charge for putting in the new floors?

1. Find the labor charge.
   $2[(8 \times \$20) + (8 \times 1.5 \times \$20) + (6 \times 2 \times \$20)] = \$1,280$

2. Find the materials charge.
   $30 \text{ ft} \times 20 \text{ ft} \times \$2 = \$1,200$

3. Find the total charge.
   Total Charge = Labor Charge + Materials Charge
   $1,280 + $1,200 = **$2,480 total charge**

Practice

Find the labor charge and the total charge.

	Time Required	Number of Employees	Hourly Rate	Labor Charge	Materials Charge	Total Charge
1.	6 hours	1	$12.00	a.	$ 300.00	b.
2.	5 hours	8	15.50	a.	175.00	b.
3.	10 hours	2	11.75	a.	0.00	b.
4.	7.5 hours	3	18.95	a.	1,675.00	b.

5. **Standardized Test Practice** Holly Holidays got the following estimates for building a display case. Which carpenter offers the best price?

Contractor	Hourly Rate	Time Required	Materials Charge
Carpenter A	$ 9.75	30 hours	$ 889.00
Carpenter B	16.00	15 hours	975.00
Carpenter C	17.50	11 hours	962.00
Carpenter D	14.25	16 hours	1,015.00

A. Carpenter A   **B.** Carpenter B   **C.** Carpenter C   **D.** Carpenter D

Computing the Total Equipment Rental Cost

19-3

Sometimes it's more economical for your business to rent equipment and furniture than to buy it. The total cost of renting items usually depends on the length of time they're rented. Some states may charge you an additional usage tax on items that are rented.

Total Rental Cost = (Rental Charge × Time) + Usage Tax

Example

Find the total rental cost.

Opal Productions is renting a copy machine. Machine Rentals charges 8 percent of the $1,875 list price per month. There is also a 4.5 percent usage fee. What is the total rental cost for one year?

1. Find the rental charge per month.
$1,875 × 8% = $150 per month

2. Find the usage tax per month.
$150 × 4.5% = $6.75

3. Find the total rental cost per month.
$150 + $6.75 = $156.75 total rental cost per month

4. Find the total rental cost per year.
12 × $156.75 = **$1,881 total rental cost per year**

Practice

Find the monthly charge and the total rental cost.

	Item	List Price	Rental Rate	Monthly Charge	Number of Months	Usage Tax	Total Rental Cost
1.	Printer	$ 589.00	10% of list	a.	2	0%	b.
2.	Scanner	637.50	9% of list	a.	3	5%	b.
3.	Copier	1,362.75	8.5% of list	a.	4	6.5%	b.
4.	Computer	2,174.89	9.75% of list	a.	6	6%	b.

5. Perfect Pizzas wants to rent a wood-fire oven. The monthly rental price is 7.5 percent of the $3,450 list price. There is a 6 percent usage fee. What is the total rental charge for one year?

6. Floors Done Right rents a floor buffer that has a list price of $1,188. The monthly rental cost is 9 percent of the list price. There is a 5.5 percent usage fee. What is the total rental charge for 2 months?

7. Standardized Test Practice Holly Holidays wants to rent a children's carousel for 3 months. It got estimates from the 4 companies below. Which one offers the lowest total rental charge for the 3-month period?

Rental Co.	List Price	Monthly Rental (% of List Price)	Usage Fee
Rental Co. A	$15,900.00	10%	0%
Rental Co. B	12,795.00	12%	4%
Rental Co. C	18,149.00	8.5%	5%
Rental Co. D	16,250.00	9.25%	3.5%

A. Rental Co. A   **B.** Rental Co. B   **C.** Rental Co. C   **D.** Rental Co. D

19-4 Computing the Monthly Telephone Cost

To run a business you have to pay for **utilities,** which are public services such as electricity, water, and gas. Each utility uses a different cost structure for charging you. The cost of monthly telephone service includes the following charges:

Total Cost for the Month = Monthly Service Charge + Cost of Additional Minutes + Cost of Additional Lines + Federal Excise Tax

Use the table below to solve the problems in this section.

Flexible Advantage Calling Plan (for 2 Lines)					
Monthly Service Plan	Included Minutes	Additional Lines per Month	Additional Airtime per Minute	Domestic Wireless Long Distance	Roaming (per Minute Across the U.S. and Canada)
$ 59.99	up to 500	$19.99	$0.35	$0.15 per minute	$0.60
89.99	up to 1,000	19.99	0.35	no charge	0.60
119.99	up to 1,500	19.99	0.35	no charge	0.60

Example

Find the total telephone cost.

Opal Productions has three telephone lines and uses the $89.99 service plan. Opal uses 1,121 minutes. A federal excise tax of 3.5 percent is added to its bill. What is Opal's total monthly telephone cost?

1. Find the cost for additional minutes.
   $(1{,}121 - 1{,}000) \times \$0.35 = \$42.35$

2. Find the cost for additional lines.
   $\$19.99 \times 1 = \$19.99$

3. Find the federal excise tax.
   $(\$89.99 + \$42.35 + \$19.99) \times 3.5\% = \$5.33$

4. Find the total telephone expense.
   $\$89.99 + \$42.35 + \$19.99 + \$5.33 = \mathbf{\$157.66}$

Practice

Use the table above to compute the total telephone cost for the month.

	Monthly Plan	Number of Minutes	Number of Lines	Federal Excise Tax	Total Cost for the Month
1.	$ 59.99	629	2	4%	
2.	89.99	1,421	3	3%	
3.	119.99	1,556	2	3.5%	
4.	89.99	995	4	4.75%	

5. **Standardized Test Practice** Holly Holidays is trying to decided which calling plan is best. It has 3 telephone lines and normally use 850 minutes per month. Flexible Advantage also offers a 3-line plan at a cost of $0.20 cents per minute. Which plan is most cost-effective for Holly Holidays?

   A. $59.99   **B.** $89.99   **C.** $119.99   **D.** the 3-line plan

Computing the Monthly Electricity Cost

19-5

The monthly cost of electricity for your business depends on two things: the **demand charge** and the **energy charge.** The demand charge is based on the **peak load** during the month. The peak load is the greatest number of **kilowatts** (kW) your business uses at any one time during the month. The energy charge is based on the total number of kilowatt hours (kWh) that your business uses during the month. The electric company may also add a **fuel adjustment charge** to your monthly bill to help cover increases in the cost of fuel needed to produce your electricity.

Example

Find the cost of electricity for the month.

Opal Productions had a peak load of 150 kilowatts of electricity during June. The demand charge is $8.50 per kilowatt. Opal used a total of 25,000 kilowatt hours of electricity during the month. The energy charge for the first 1,000 kilowatt hours is $0.065 per kilowatt hour. The cost of the remaining kilowatt hours is $0.06 per kilowatt hour. The fuel adjustment charge for June is $0.02 per kilowatt hour. What is Opal's total cost for electricity for the month of June?

1. Find the demand charge.
   $150 \times \$8.50 = \$1,275$

2. Find the energy charge.
   $(1,000 \times \$0.065) + [(25,000 - 1,000) \times \$0.06] = \$1,505$

3. Find the fuel adjustment charge.
   $25,000 \times \$0.02 = \$500$

4. Find the total electric cost.
   Total Cost for the Month = Demand Charge + Energy Charge + Fuel Adjustment Charge
   $\$1,275 + \$1,505 + \$500 =$ **$3,280 total cost for the month**

Practice

Find the total cost of electricity for the month.

	kWh	Peak Load	Demand Charge/kW	Energy Charge/kWh	Fuel Adjustment Charge/kWh	Total Cost
1.	15,000	75	$6.75	$0.075	$0.015	
2.	12,500	90	6.49	0.067	0.012	
3.	21,250	175	7.27	0.069	0.017	

4. **Standardized Test Practice** Holly Holidays had a peak load of 95 kilowatts of electricity in May. The demand charge is $6.85 per kilowatt. Holly Holidays used a total of 12,000 kilowatt hours of electricity during May. The energy charge for the first 10,000 kilowatt hours is $0.075 per kilowatt hour. The cost of the remaining kilowatt hours is $0.062 per kilowatt hour. The fuel adjustment charge is $0.0175 per kilowatt hour. What is Holly Holidays' total cost of electricity for May?

   A. $650.75   **B.** $1,610.75   **C.** $1,734.75   **D.** $1,760.75

19-6 Calculating the Total Cost of Professional Services

Your business might use **consultants,** professional advisers hired to solve a particular problem. The **consultant's fee,** the amount paid for professional services, may be in the form of a flat fee, a percentage of the cost of the project, or an hourly charge.

Example

Find the total cost of consultants' fees.

Opal Productions wants to attract new business. It hired a marketing consultant for 50 hours at $75 per hour. It also hired an advertising firm that charges 10 percent of any new business Opal brings in. As a result of the advertising firm's efforts, Opal receives $750,000 worth of new business. What is Opal's total cost for professional services?

1. Find the cost for the marketing consultant.
   50 × $75.00 = $3,750

2. Find the cost for the advertising firm.
   $750,000 × 10% = $75,000

3. Find the total cost.
   Total Cost = Sum of Consultants' Fees
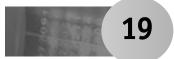 $3,750 + $75,000 = **$78,750 total cost**

Practice

Find the total cost for professional services.

	Professional Service	Fee Structure	Project Information	Total Fee
1.	Tax attorney	$125.00 per hour	Worked 55 hours	
2.	Physical Therapist	$27.75 per hour	Worked 60 hours	
3.	Interior Decorator	$7,500 flat fee	Worked 35 hours	
4.	Marketing Consultant	8.5% of new business brought in	$825,000 of new business brought in	

5. Perfect Pizzas hired an interior designer to plan its new restaurant layout and a contractor to install new booths. The interior designer charged a flat rate of $3,500. The contractor charged $18.00 per hour for 80 hours of work. What was Perfect Pizzas total cost for professional services?

6. **Standardized Test Practice** Holly Holidays installed a new music system in each of its 4 locations. It hired a sound specialist who charged a flat rate of $600 per store and an electrician who charged $16 per hour. The job took the electrician 5 hours to complete at each store. What was Holly Holidays' total cost for installing the new music system?

   A. $680   **B.** $2,480   **C.** $920   **D.** $2,720

19 Chapter Review

Start-Up Service Costs

You've decided to start your own Web design firm. Before you take the plunge, you have to figure out what your first month's start-up costs will be.

1. You can get by with minimal office space, buy you'd like to have a downtown office where clients can easily have access to you. An office measuring 25 feet by 30 feet in a prime building location will cost you $22.50 per square foot per year. What is your monthly rental charge?

2. To prepare the office space for your high-tech needs, you hire an electrician to wire your business. The electrician charges you $40 per hour for 25 hours of consultation and labor, plus an additional materials charge of $368. What is the total charge for the electrician's services?

3. You decide to rent 10 computers until you are firmly established in your new business. The monthly rental cost for each computer is 9 percent of the $1,200 list price. There is an additional 6 percent usage tax. What is the total cost for the month to rent the computers?

4. You sign up for the $39.99 telephone service value plan, which includes two lines and 500 minutes. Additional lines are $15 each. Additional minutes will cost you $0.25 per minute. There is also a federal excise tax of 4 percent. If you have 3 lines and use 575 minutes per month, what is your monthly telephone cost?

5. Your peak load for electricity during the month was 80 kilowatts. The demand charge is $6.75 per kilowatt. You use 6,700 kilowatt hours of electricity during the month. The energy charge for the first 5,000 kilowatt hours is $0.075 per kilowatt hour. The cost of the remaining kilowatt hours is $0.05 per kilowatt hour. The fuel adjustment charge for the month is $0.0115 per kilowatt hour. What is your monthly electricity cost?

6. What are your total first month start-up costs to operate your business?