Appliance Details:

1. **LED bulb**: 10W, used for 5 hours/day
2. **Washing machine**: 500W, used for 1 hour/day
3. **Microwave**: 1000W, used for 0.5 hours/day
4. **Fan**: 75W, used for 8 hours/day
5. **Refrigerator**: 150W, runs 24 hours/day

Step-by-Step Calculation:

1. Calculate Daily Energy Consumption:

For each appliance, use the formula:

Energy (Wh)=Power (W)×Time (hours)

LED bulb:

10 W×5 hours=50 Wh⇒0.05 kWh

Washing machine:

500 W×1 hour=500 Wh⇒0.5 kWh

Microwave:

1000 W×0.5 hours=500 Wh⇒0.5 kWh

Fan:

75 W×8 hours=600 Wh⇒0.6 kWh

- **Refrigerator:**

150 W×24 hours=3600 Wh⇒3.6 kWh

2. Calculate Total Daily Energy Consumption:

Total daily energy=0.05+0.5+0.5+0.6+3.6=5.25 kWh

3. Calculate Monthly Energy Consumption:

Monthly energy=5.25 kWh/day×30 days=157.5 kWh

4. Calculate Cost:

Assume the electricity rate in Egypt is 1.45 EGP per kWh (check the latest rates as they can vary).

Monthly cost=157.5 kWh×1.45 EGP/kWh

Reducing Electricity Consumption:

1. Upgrade to Energy-Efficient Appliances:

- Use energy-efficient models (e.g., Energy Star-rated).
- Replace old appliances with newer, more energy-efficient ones.

2. Optimize Usage:

- Turn off lights and appliances when not in use.
- Use power strips to easily turn off multiple devices.
- Utilize natural light during the day.

3. Implement Energy-Saving Practices:

- Set your refrigerator to an optimal temperature.
- Use the washing machine with full loads and at lower temperatures.
- Use fans instead of air conditioners when possible.
- Set the air conditioner to a higher temperature (e.g., 24-26°C) and use it only when necessary.