Financial Lit Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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WS Assessment

Target 17:

Budget: Utilities cost

**I can:**

* Compute the cost of electric, gas, oil, and water for the home.
* Compute the cost of using specific appliances for specific lengths of time.
* Compute the time it takes an energy saving appliance to pay for itself.
* Compute the cost of cell phone calls, text messaging, Internet service, and cable television.
* Compare different plans for these services.

**Unit 8 Math Topics:**

* Circle (sectors, central angel) Cusp Domain
* Fractions, decimals, and ratios Greatest integer function
* Linear equations and inequalities Literal expressions
* Matrices Piecewise functions Proportions
* Rational and exponential equations
* Read and interpret data: line graphs, bar graphs, circle graphs
* Slope and graphing linear functions
* Spreadsheets and formulas
* Systems of equations Volume

If you own a home or rent an apartment, you are charged for using electricity, natural gas, heating oil, and water. These services are **utilities**. You pay for utilities after you use them, so you are actually using credit when you purchase utilities. Many people don’t think about the costs of these services as they are using them. How much electricity do you use? You probably don’t know the exact amount, but it is recorded by a **meter**. The amount of electricity used is measured in **watt-hours.** Natural gas and water are sold by the cubic foot, which represents the amount of space the gas or water occupies, not the weight. The unit **ccf** represents 100 cubic feet. The amount of space is the **volume**.

A certain electric mixer requires 125 watts. How much would it cost to run the mixer for a total of 90 minutes at a cost of $0.10 per kilowatt-hour?

Most communities

use water meters to monitor

your water consumption

**Assessment Target 17**

* **I can…** Calculate area and of irregular regions

 The monthly rent for a one-bedroom apartment at North Shore Towers for six consecutive years is shown in the table.

**a.** Represent the years using the numbers 5, 6, 7, 8, 9, and 10 respectively. Draw a scatterplot for the data.

**b.** Find the exponential regression equation that models the rent increases. Round to the nearest thousandth.

**c.** Predict the rent in the year 2021. Round to the nearest dollar. Stamp

The Tensers bought a mobile home for $89,500. They rent space in a trailer park for $900 per month. The rent increases 2% per year.

If they put a down payment of $10,000 on the trailer, how much must they borrow?

If they borrow the amount from part a for 15 years at an APR of 6%, what will the monthly payment be to the nearest cent?

What will be the first monthly payment? final monthly payment?

How much will they pay each month for their trailer and the space for the first year?

Show Spreadsheet. Stamp

Use spreadsheets to compare these situations after 10 years. Stamp

Buying Renting

Total paid and total paid to Total amount paid for a $2,600

the principal for a $300,000, monthly rent that has an annual

15-year mortgage with a 6.5% increase of 2% after 10 years

APR