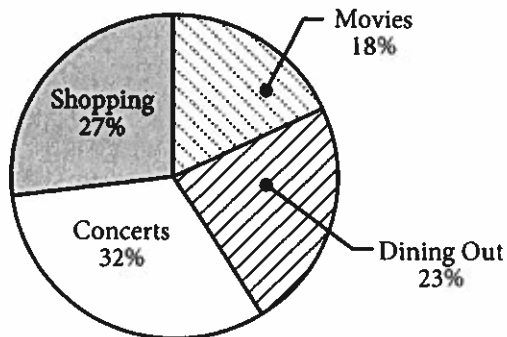


**Financial Math Test 10****True/False**

Indicate whether the statement is true or false.

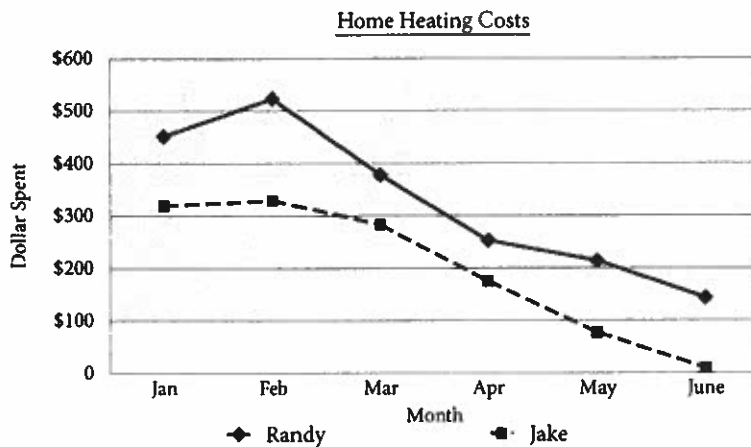
- \_\_\_ 1. A cash flow analysis is a type of budget that helps people plan for future spending and savings.
- \_\_\_ 2. Some examples of variable expenses are utility bills and entertainment costs.
- \_\_\_ 3. Andy leaves a certain radio on all day while he works. This radio requires 125 watts of electricity. At a price per kilowatt-hour of \$0.10, it costs \$0.10 to play the radio all day.
- \_\_\_ 4. Tamika created this pie chart of her entertainment budget. According to the chart, if Tamika's budget is \$125 for entertainment, \$36 is budgeted for shopping.

Entertainment Budget



- \_\_\_ 5. Net worth is the difference between a person's assets and their liabilities. Net worth can be a positive number or a negative number.
- \_\_\_ 6. A nursery located in Florida uses a water meter to measure their water usage in ccf. They are charged \$0.36 per ccf of water. Their last meter reading was 123,692 and their present reading is 127,394. For this usage, the nursery was charged \$332.72.
- \_\_\_ 7. The Yamamotos use natural gas to heat their home. Last year they paid \$14.50 per thousand cubic feet (Mcf). The price increased 20% this year so they are now paying \$17.4 per Mcf.

8. Randy and Jake are brothers living in the same city in homes that are about the same age and size. One brother has recently purchased an energy-efficient gas furnace while the other brother relies on an older, less efficient, oil furnace. By comparing the lines of the graph, it appears that Randy has the more energy efficient furnace.



9. A spreadsheet is an example of an electronic matrix.
10. Jane wants to keep her debt-to-income ratio at the recommended 15% or lower. The sum of Jane’s assets is \$12,000 and the sum of her liabilities is \$2,300, so she easily falls within the recommended amount.

**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

11. Last month, Marybeth was charged \$112 for 945 kWh of electricity. How much did the company charge her per kWh, to the nearest cent?
- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| <p>a. \$0.06</p> <p>b. \$0.08</p> | <p>c. \$0.10</p> <p>d. \$0.12</p> |
|-----------------------------------|-----------------------------------|

12. Sarah lives in a part of the country where there are droughts. Consequently, the water company increases the cost per ccf of water based on usage. The piecewise function shows the rate schedule.

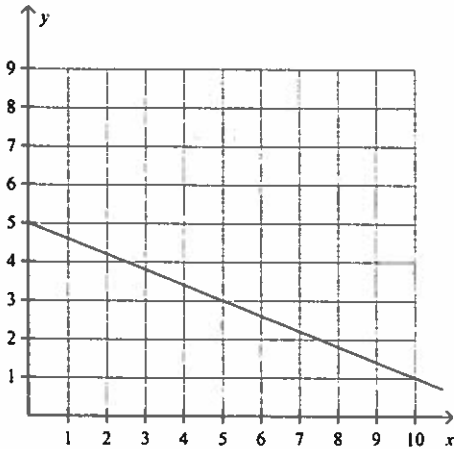
$$c(x) \begin{cases} 0.18(x) & \text{when } x \leq 160 \\ 0.18(160) + 0.22(x - 160) & \text{when } 160 < x \leq 240 \\ 0.18(160) + 0.22(x - 160) + 0.24(x - 240) & \text{when } x > 240 \end{cases}$$

If Sarah used 210 ccf of water last month, what was she charged?

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| <p>a. \$37.80</p> <p>b. \$38.80</p> | <p>c. \$39.80</p> <p>d. \$47.00</p> |
|-------------------------------------|-------------------------------------|

13. Which statement is NOT part of a debt-reduction plan?
- |   |   |
|---|---|
| <p>a. Lower debts with the highest interest rates.</p> <p>b. Slow or eliminate credit card spending.</p> <p>c. Only pay the mimimum amount when possible.</p> | <p>d. Use an online debt management calculator.</p> |
|---|---|

14. Jose and Lisa Sanchez created a spreadsheet to chart their income and expenses for the month. The sum of their fixed expenses is in cell B10, the sum of their variable expenses is in cell B23, and the sum of their pro-rated non-monthly expenses is in cell B40. What formula should be entered in the spreadsheet cell that contains their total expenses?
- a.  $=\text{SUM}(B10-B40)$
  - b.  $=\text{SUM}(B10:B23:B40)$
  - c.  $=\text{SUM}(B10*B23*B40)$
  - d.  $=\text{SUM}(B10+B23+B40)$
15. A single woman uses an online cash flow calculator which reveals a cash flow of  $-203$ . What does this mean?
- a. She is earning more than she is spending.
  - b. She is spending more than she is earning.
  - c. She has \$203 extra in her budget each month.
  - d. She has \$203 more she can spend.
16. Mrs. Watanabe is choosing a cell phone plan. One plan costs \$35 a month and includes 450 minutes. The charge for each minute over 450 is \$0.16. The company also offers an unlimited calling plan with a \$55 monthly charge. At how many minutes would the cost of the two plans be the same?
- a. 575 minutes
  - b. 566 minutes
  - c. 552 minutes
  - d. 525 minutes
17. Ralph has budgeted \$175 for entertainment. He uses this money to go out on dates for \$35 or to go out with his friends for \$15. Which budget line equation represents the situation?
- a.  $35x - 15y = 180$
  - b.  $35x + 15y = 180$
  - c.  $(3x + 5y) = 180$
  - d.  $180 - (35x + 15y)$
18. Mrs. Kalbrisa budgets \$125 a month for entertainment. She has allocated \$10 for the movies and \$25 for dining out. She constructs the following budget line graph to represent the situation, where  $x$  is the number of movies and  $y$  is the number of times she dines out in a month. What combination does NOT fall within her budgeted amount for entertainment?



- a. (5, 3)
- b. (3, 3)
- c. (1, 4)
- d. (7, 5)

Name: \_\_\_\_\_

ID: A

19. Which is NOT an example of a budget?
- a. frequency budget plan
  - b. envelope accounting system
  - c. cash flow analysis
  - d. year-long expense budget plan

**Short Answer**

20. Manuel works for the water company as a meter reader. The meter below is the Jansen's water meter. What is the reading, in ccf, on the meter shown?

