

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

- 1) Amelia's bank statement listed a balance of \$328.80. She opened the account 14 years ago with a \$200 deposit. If there were *no* deposits or withdrawals, what is the simple interest rate on the account?  
 A) 0.46%                              B) 11.7%                              C) 1%                              D) 4.6%
- 2) The number of chirps made by a cricket varies proportionately to the temperature. At 12°C a cricket chirps 30 times per minute.

**Part A**

Find the proportionality constant for chirps per degree Celsius. *Show your work.*

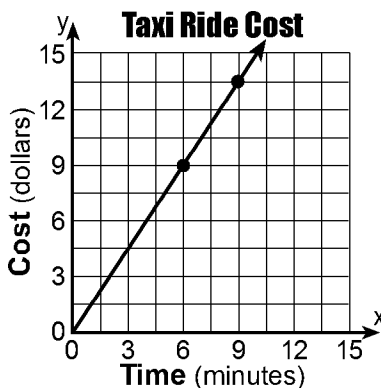
*Answer:* \_\_\_\_\_ chirps/°C

**Part B**

Use your answer from Part A to determine how many chirps per minute a cricket will make at 30°C. *Show your work.*

*Answer:* \_\_\_\_\_ chirps/minute

- 3) Amity and Beth are traveling in a taxi. The graph below shows a proportional relationship between the time they rode in the taxi and the cost of the taxi ride.



Which expression can be used to find the unit rate in dollars?

- A)  $\frac{0}{0}$                               B)  $\frac{9}{6}$                               C)  $3 + 4.5$                               D)  $\frac{6}{9}$

- 4) A cabin in Gatlinberg costs \$330 to stay for 3 days. How much does each day cost?

Write an equation that can be used to solve this situation.

*Answer:* \_\_\_\_\_

- 5) The sum of  $-\frac{2}{8}$  and  $-\frac{10}{32}$  is what number?

**Answer:** \_\_\_\_\_

- 6) A chef cooked a roast weighing  $12\frac{1}{3}$  pounds. After  $3\frac{2}{3}$  pounds of fat were trimmed, the roast was cut into  $\frac{1}{3}$ -pound servings. How many servings were cut from the roast?

A) 26                                      B) 24                                      C) 18                                      D) 29

- 7) Find the product of the given set of numbers:

$$\begin{array}{r} 0.8 \\ -0.4 \\ \hline \end{array}$$

A) -32                                      B) -0.32                                      C) 0.32                                      D) 32

- 8) Subtract:  $+\frac{5}{8} - (+\frac{11}{12})$

A)  $\frac{7}{24}$                                       B)  $1\frac{15}{24}$                                       C)  $-\frac{7}{24}$                                       D)  $-1\frac{15}{24}$

- 9) Solve the equation for the given variable:

$$3z - 19 = -31$$

A) -3                                      B) -4                                      C) -16                                      D) -7

- 10) On a movie rental website, a monthly fee of \$9 is charged for delivery and each rental costs a discounted rate of  $n$  dollars. If in one month Grady rents 14 videos and is charged a total of \$58, how much does he pay per video rental?

**Show your work.**

**Answer:** \$ \_\_\_\_\_

Questions 11 and 12 refer to the following:

Simplify the given expression:

11)  $7y^3 + 3y^3 =$

**Answer:** \_\_\_\_\_

12)  $14d + (-9d) =$

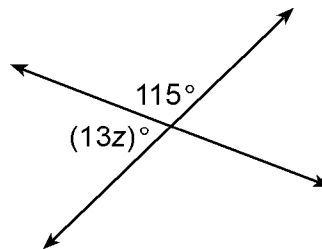
A)  $23d$                                       B)  $5d^2$                                       C)  $-5d$                                       D)  $5d$

- 13) Given the three angle measure of a triangle, determine if it is possible or impossible to draw a triangle with the given angle measures.
- ◇ If it is possible, then draw the triangle.
  - ◆ If it is impossible, explain why these measures can *not* be the angles of a triangle.

Given:  $60^\circ, 50^\circ, 80^\circ$

***Draw or explain your answer in the space below.***

- 14) If the actual distance between two locations is 60 miles and the map scale is 2 inches = 30 miles, what is the distance between the two locations on the map?
- A) 1 inch                      B)  $\frac{1}{2}$  inch                      C) 4 inches                      D) 2 inches
- 15) Solve for  $z$  in the diagram below.



***Show your work.***

***Answer:*** \_\_\_\_\_

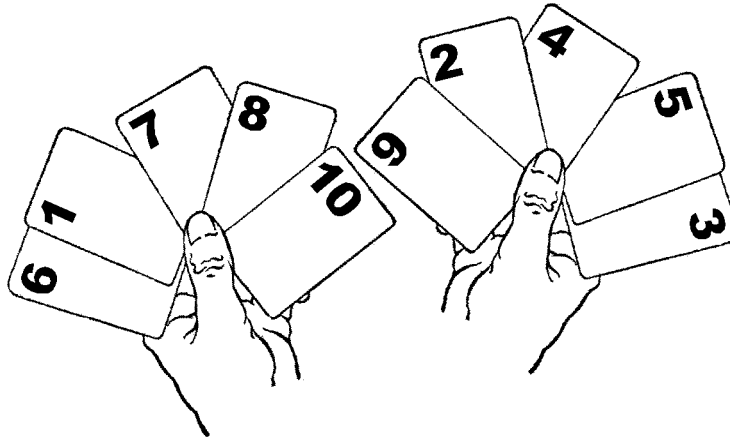
- 16) Calculate the surface area of a rectangular solid with a length of 22 cm, a width of 3.2 cm, and a height of 13.8 cm.
- Show your work.***

***Answer:*** \_\_\_\_\_  $\text{cm}^2$

- 17) What is the probability that a standard 52-card deck contains a nine of ♣?
- A) 0                                      B)  $\frac{1}{2}$                                       C)  $\frac{1}{52}$                                       D) 1

Questions 18 and 19 refer to the following:

Elizabeth's dad is helping her conduct an experiment for homework. Elizabeth randomly chooses one card from the 10 cards held by her dad, looks at the number, and then replaces the card.



- 18) If Elizabeth repeats the process described 100 times, how many times would you expect her to pick the number 3 or the number 5?
- A) 25                                      B) 2                                      C) 20                                      D) 10
- 19) If Elizabeth repeats the process described 150 times, how many times would you expect her to pick a multiple of 3?
- A) 45                                      B) 100                                      C) 50                                      D) 30

**Math Test Scores**

| Stem | Leaf              |
|------|-------------------|
| 6    | 7 8               |
| 7    | 0 1 1 3 5 7 8 8 8 |
| 8    | 0 1 3 4 4 5 8 9   |
| 9    | 0                 |

**Math Test Scores**

| Stem | Leaf                  |
|------|-----------------------|
| 6    | 1 8                   |
| 7    | 0 6 7 9               |
| 8    | 0 2 2 4 5 7 8 8 8 8 9 |
| 9    | 0 1 3 3 5 6 6 7 7 9   |
| 10   | 0 0 0                 |

20)

**KEY:** 7|8 means a test score of 78

What is the difference between the ranges of the data represented by the stem-and-leaf plots shown?

*Show your work.*

*Answer:* \_\_\_\_\_