

1

1

Charissa ordered 3 cans of lemonade for each person at her party. She also ordered 1 pizza for every 4 people. If she ordered 6 pizzas, which of the following could be the number of cans of lemonade she ordered?

A) 36
B) 48
C) 60
D) 72

2

1

$$20d + 0.7m = 235$$

Shelly spent \$235 to rent a moving van. The equation above shows the relationship between the number of days she rented the van, d , and the number of miles she drove the van, m . If she rented the van for 3 days, how many miles did she drive the van?

A) 118
B) 250
C) 307
D) 421

3

2

$$C = 10x + 4y$$

The formula above gives the monthly cost C , in dollars, of operating a delivery truck when the driver works a total of x hours and when y gallons of gasoline are used. If, in a particular month, it cost no more than \$2,000 to operate the truck and at least 150 gallons of gas were used, what is the maximum number of hours the driver could have worked?

A) 125 C) 500
B) 140 D) 1,400

4

3

When the temperature of water is 25 degrees Celsius, sound travels through the water at a constant speed of about 1,500 meters per second. At the same temperature, about how far, in meters, would sound travel through the water in 15 seconds?

A) 37,500
B) 22,500
C) 375
D) 100

5

3

A physician prescribes a treatment in which a patient takes 2 teaspoons of a medication every 6 hours for 5 days. According to the prescription, how many teaspoons of the medication should the patient take in a 24-hour period?

A) 4
B) 6
C) 8
D) 40

6

3

$$l = 24 + 3.5m$$

One end of a spring is attached to a ceiling. When an object of mass m kilograms is attached to the other end of the spring, the spring stretches to a length of l centimeters as shown in the equation above. What is m when l is 73?

A) 14
B) 27.7
C) 73
D) 279.5

7

4 Two people sweep the floor. The table gives their sweeping rates, in square yards per minute (yd²/min).

Person	Rate
Jeremy	12
Eric	16

If each person sweeps the floor for 5 minutes, how much greater of an area, in square yards, does Eric sweep than Jeremy?

A) 20
B) 60
C) 80
D) 140

8

4 The number of states that joined the United States between 1776 and 1849 is twice the number of states that joined between 1850 and 1900. If 30 states joined the United States between 1776 and 1849 and x states joined between 1850 and 1900, which of the following equations is true?

A) $30x = 2$
B) $2x = 30$
C) $\frac{x}{2} = 30$
D) $x + 30 = 2$

9

4 An electric company charges Jerome \$0.05 per kilowatt-hour (kWh) of energy he uses in his house. If Jerome was charged \$36 by the electric company, how many kilowatt-hours of energy did Jerome use?

A) 0.0014
B) 1.8
C) 180
D) 720

10

5 The density of an object is equal to the mass of the object divided by the volume of the object. What is the volume, in milliliters, of an object with a mass of 24 grams and a density of 3 grams per milliliter?

A) 0.125
B) 8
C) 21
D) 72

11

$T = 0.32x + 0.29y$

Janice raises chickens. She uses the equation shown to estimate the total daily feed intake T , in pounds, for x male and y female chickens that are between 28 and 35 days old. 6

Using the given equation, Janice estimates that the total daily feed intake for her chickens is 90 pounds. If Janice has 100 male chickens, how many female chickens does she have?

A) 191
B) 200
C) 228
D) 245

12

Haimi drove a car from West Union, Minnesota, through North Dakota, to Miles City, Montana. The total distance she traveled through each state is shown in the figure.

West Union, Minnesota — 120 miles — Minnesota — 360 miles — North Dakota — 120 miles — Minnesota — Miles City, Montana

The distance d , in miles, Haimi drove as a function of the time t , in hours, since she started driving is modeled by the equation $d = 60t$.

8 According to the model, what distance, in miles, had Haimi driven 3 hours after she started driving?

A) 20
B) 60
C) 120
D) 180

1 D
2 B
3 B

4 B
5 C
6 A

7 A
8 B
9 D

10 B
11 B
12 D