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Lesson 1

Problem 1

An elevator travels 310 feet in 10 seconds. At that speed, how far can this elevator travel in 12 seconds? Explain your reasoning.

Solution

372 feet. $310 \div 10 = 31$, so the elevator travels 31 feet per second. and $31 \cdot 12 = 372$.

Problem 2

Han earns \$33.00 for babysitting 4 hours. At this rate, how much will he earn if he babysits for 7 hours? Explain your reasoning.

Solution

He will earn \$57.75 in 7 hours. $33 \div 4 = 8.25$, so the hourly rate is \$8.25. If he earns \$8.25 every hour, he will earn $8.25 \cdot 7$ or \$57.75.

Problem 3

The cost of 5 cans of dog food is \$4.35. At this price, how much do 11 cans of dog food cost? Explain your reasoning.

Solution

11 cans cost \$9.57. $4.35 \div 5 = 0.87$, so each can costs 87 cents, and $0.87 \cdot 11 = 9.57$.

Problem 4

A restaurant has 26 tables in its dining room. It takes the waitstaff 10 minutes to clear and set 4 tables. At this rate, how long will it take the waitstaff to clear and set all the tables in the dining room? Explain or show your reasoning.

Solution

It will take 65 minutes, or 1 hour and 5 minutes. Sample strategy:

number of tables	time in minutes
4	10
1	2.5
26	65

Problem 5

(from Unit 2, Lesson 16)

A sandwich shop serves 4 ounces of meat and 3 ounces of cheese on each sandwich. After making sandwiches for an hour, the shop owner has used 91 combined ounces of meat and cheese.

1. How many combined ounces of meat and cheese are used on each sandwich?
2. How many sandwiches were made in the hour?
3. How many ounces of meat were used?
4. How many ounces of cheese were used?

Solution

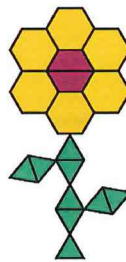
1. 7 ounces
2. 13 sandwiches
3. 52 ounces of meat
4. 39 ounces of cheese

Problem 6

(from Unit 2, Lesson 14)

Here is a flower made up of yellow hexagons, red trapezoids, and green triangles.

1. How many copies of this flower pattern could you build if you had 30 yellow hexagons, 50 red trapezoids, and 60 green triangles?
2. Of which shape would you have the most left over?



Solution

I could build 5 copies of the flower pattern, because that would use all 30 of the yellow hexagons. I would have 40 red trapezoids left over.

Problem 7

(from Unit 1, Lesson 16)

Match each quantity in the first list with an appropriate unit of measurement from the second list.

- A. the perimeter of a baseball field
- B. the area of a bed sheet
- C. the volume of a refrigerator
- D. the surface area of a tissue box

- E. the length of a spaghetti noodle
 - F. the volume of a large lake
 - G. the surface area of the the moon
1. centimeters (cm)
 2. cubic feet (cu ft)
 3. cubic kilometers (cu km)
 4. meters (m)
 5. square feet (sq ft)
 6. square inches (sq in)
 7. square kilometers (sq km)

Solution

- A. 4
- B. 5
- C. 2
- D. 6
- E. 1
- F. 3
- G. 7

Lesson 2

Problem 1

Select the unit from the list that you would use to measure each object.

- A. The length of a pencil
 - B. The weight or mass of a pencil
 - C. The volume of a pencil
 - D. The weight or mass of a hippopotamus
 - E. The length of a hippopotamus
 - F. The length of a fingernail clipping
 - G. The weight or mass of a fingernail clipping
 - H. The volume of a sink
 - I. The volume of a bowl
 - J. The length of a chalkboard or whiteboard
 - K. The weight or mass of a chalkboard or whiteboard
 - L. The length of the border between the United States and Canada
1. centimeters
 2. cups

3. feet
4. gallons
5. grams
6. inches
7. kilograms
8. kilometers
9. liters
10. meters
11. miles
12. milliliters
13. millimeters
14. ounces
15. pounds
16. quarts
17. tons
18. yards

Solution

Answers Vary. Possible responses:

- A. inches, centimeters
- B. grams, ounces
- C. milliliters
- D. pounds, kilograms, tons
- E. feet, yards, meters
- F. millimeters
- G. grams
- H. gallons, liters, quarts
- I. cups, liters, quarts
- J. feet, yards, meters
- K. kilograms, pounds
- L. kilometers, miles

Problem 2

When this pet hamster is placed on a digital scale, the scale reads 1.5.



