NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DATE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ratios/Unit Rate

**Five hundred sixth-grade students**

**were surveyed. Of these students**

**that were surveyed . . .**

• 375 had been to a baseball game

• 270 own either a cat or a dog

• 125 had traveled on an airplane

1) What is the ratio of sixth-grade students who own either a cat or a dog to the total number of sixth-grade students surveyed? (Write the ratio in THREE ways.)

2) What is the ratio of sixth-grade students who had been to a baseball game to the number of students who had traveled on an airplane OR own either a cat or a dog? (Write the ratio in THREE ways)

**A survey on favorite colors was created. List all three forms of ratios for the following:**

|  |  |
| --- | --- |
| Favorite Color | Number of People |
| Green | 23 |
| Yellow | 20 |
| Blue | 16 |
| Red | 25 |

3) Green to Yellow

4) Blue to Yellow

5) Red to Total Number of People

**Find the Unit Rate. Don’t forget both the labels for each problem! Show your work!**

6) In 4 months, 104 gallons were used (determine gallons per month)

7) 322 miles in 7 hours (determine miles per hour)

8) 5 movie tickets for $37.50 (determine cost per ticket)

9) $230 for 40 hours (determine cost per hour)

10) The scale of a map is 1 inch represents 4 miles. How many miles does 0.5 inches represent?

11) At Dunkin Donuts, a box of 50 munchkins costs $7.00 and a box of 75 munchkins costs $9.00. Which is the better deal?

The table below shows price per candy bar:

|  |  |
| --- | --- |
| Shmestle Crunch Pack of 36 | $21.89 |
| Shmickers Pack of 4 | $32.99 |
| Shmounds Pack of 10 | $25.00 |

12) What is the unit price of Shmestle?

13) What is the unit price of Shmickers?

14) What is the unit price of Shmounds?

15) Which candy has the lowest unit price?

16) The gas consumption in vehicles is reported in litres per 100 km (L/100km).

a) Car A has an average consumption of 17.2 L/100 km. Car B has an average consumption

of 15.2 L/100 km. Which car is more energy efficient?

b) Complete this table. Round each answer to the nearest tenth of a litre per 100 km.

|  |  |  |  |
| --- | --- | --- | --- |
| Car | Distance Driven (km) | Gas Used (L) | Gas Consumption (L/100 km) |
| X | 750 | 48 |  |
| Y | 1240 | 92 |  |
| Z | 565 | 27.5 |  |

c) Which car was most efficient? Which was least efficient?

17) Decide which is the better value based on the unit prices.

1. $25.00 for concert tickets for 2 people or $36.00 for concert tickets for 3 people.
2. $380 for a bus for 32 people or $420 for a bus for 38 people.
3. $4.25 for 4 L of milk or $2.55 for 2 L of milk.

**Instructions:** For each question, calculate the unit rate for each option and determine

which one is the BEST buy. **Write your final choice in the last column.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Option 1** | **Option 2** | **Unit Rate 1** | **Unit Rate 2** | **BEST BUY** |
| Question 18 | 3 batteries  for $4.80 | 12 batteries for $14.76 | $4.80 / 3  = $1.60 | $14.76 / 12  = $1.23 | OPTION # 2  (cheaper) |
| Question 19 | 22 staplers  for $330 | 4 staplers for  $80 |  |  |  |
| Question 20 | 5 calculators  for $105 | 24 calculators  for $552 |  |  |  |
| Question 21 | 18 pens for  $6.84 | 30 pens for  $8.40 |  |  |  |
| Question 22 | 18 ounces for  $7.38 | 27 ounces for  $15.39 |  |  |  |
| Question 23 | 11 books for  $99 | 29 books for  $203 |  |  |  |
| Question 24 | $15.98 for 34  litres of gas | $4.68 for 12  litres of gas |  |  |  |