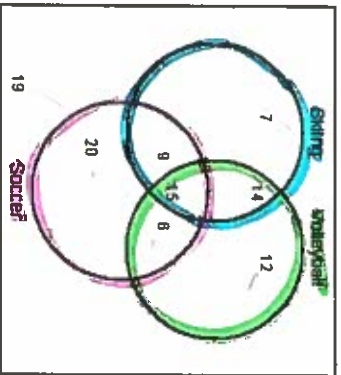


Name : _____ Score : _____
 Teacher : _____ Date : _____

Answer the Questions Based on the Venn Diagram



- 1) How many students do not like either Skiing or Volleyball ? 39
- 2) How many students like Volleyball or Soccer ? 76
- 3) How many students like both Skiing and Soccer but not Volleyball ? 9
- 4) How many students only like Skiing ? 7
- 5) How many students do not like either Volleyball or Soccer ? 26
- 6) How many students like Skiing or Soccer but not Volleyball ? 36
- 7) How many students like Volleyball or Soccer but not Skiing ? 38
- 8) How many students like Skiing or Soccer ? 71
- 9) How many students like both Skiing and Soccer ? 24
- 10) How many students do not like both Skiing and Volleyball ? 73

Venn Diagrams

Create a Venn Diagram for the following information then answer the questions.

A survey of used car salesmen revealed the following information:

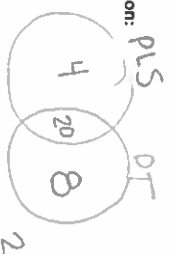
- 24 wear white patent-leather shoes
- 28 wear plaid trousers
- 20 wear both
- 2 wear neither

How many were surveyed?

34

How many wear plaid trousers but don't wear white patent-leather shoes?

8



Truth tables

Create a truth table for the following problems

"p v ~ q"

| p | q | p v ~ q |
|---|---|---------|
| T | T | F |
| T | F | T |
| F | T | T |
| F | F | T |

"p ^ ~ q ^ r"

| p | q | r | p ^ ~ q ^ r |
|---|---|---|-------------|
| T | T | T | F |
| T | T | F | F |
| T | F | T | F |
| T | F | F | F |
| F | T | T | F |
| F | T | F | F |
| F | F | T | F |
| F | F | F | F |

Conversions

Convert 26,500 inches to miles

$$26,500 \div 12 = 2208.33 \text{ ft} \div 5280 = .418 \text{ m}$$

How many cords of wood could you fit in a room that is 4 yards long, 4 yards wide and 2 yards high?

$$4 \cdot 4 \cdot 2 = 32 \text{ yd}^3 \cdot 27 \text{ ft}^3 = 864 \text{ ft}^3 \div 128 \text{ ft}^3 = 6.75 \text{ CORDS}$$

Your hotel rate in Tokyo is 31,000 yen per night. What is the nightly rate in US dollars?

$$31,000 (.012) = \$372$$

If your car gets 28 miles per gallon, how much does it cost to drive 250 miles when gasoline costs \$2.90 per gallon? How many gallons do you need to complete the drive?

$$250/28 = \boxed{8.9 \text{ gall}} \quad 8.9 (2.90) \approx 25.81 \text{ (ROUNDED)} \\ 25.89 \text{ (NOT ROUNDED)}$$

Percentages

Find the absolute change and the relative (percent) change for each problem.

The average sale price of a house in the US decreased from \$301,000 in February 2008 to \$152,000 in February 2013

$$152,000 - 301,000 = \boxed{-149,000} \times 100 \approx -49.5\%$$

The annual interest rate for Jack's savings account increased from 2.3% to 2.8%

$$2.8 - 2.3 = \frac{.5}{2.3} \times 100 = 21.74\%$$

In 2014, Georgia's average pay for new teachers was \$36,750 and in Texas, the average pay for new teachers was \$45,000. Compare Georgia's pay to Texas in both absolute and relative terms.

$$36,750 - 45,000 = \frac{-8,250}{45,000} \times 100 = -18.33\%$$

The largest single-day point loss of the Dow Jones Industrial Average occurred on September 29, 2008, when the market lost 778 points and closed at 10,365. What was the percentage loss?

$$10,365 - 11,143 = \frac{-778}{11,143} \times 100 = -6.98\%$$

The 2410 women undergraduates at the college comprise 54% of all undergraduates attend the college?

How many undergraduates →

$$x (.54) = 2410$$

$$x = 4462.9$$

$$\approx 4463$$