

Questions From Test 4:

4) ratio of st. who C's to st. who got B's

$$\frac{5}{4} = \frac{X}{4}$$

5) ratio A's who took test

$$\frac{6}{18} = \frac{1}{3}$$

Oct 23-1:12 PM

#10

$$\frac{8 \text{ lbs.}}{2} = \frac{20 \text{ lbs.}}{x}$$

$$\frac{8x}{8} = \frac{40}{8}$$

$x = 5 \text{ weeks}$

$$\frac{8}{14} = \frac{20 \text{ lb}}{x}$$

$$8x = 280$$

$x = 35 \text{ days}$

Oct 23-3:07 PM

#9

$$\frac{x}{1.8} = \frac{5}{1.5}$$

$$1.5x = 5 \cdot 1.8$$

$$\frac{1.5x}{1.5} = \frac{9}{1.5}$$

$x = 6$

1.519

15 | 90.0

60

30

0

90175

Oct 23-3:09 PM

#11

6 for \$5.57

8 for \$8.36

928

15.570

-54

17

12

50

48

12¢

117¢

0.12¢

1045

8 | 8.360

80

30

36

32

40

40

0

1.045

.928

1.17

Oct 23-3:11 PM

5.2, 5.3

1. What % of 24 is 12?

$$\frac{x}{100} = \frac{12}{24}$$

$$\frac{24x}{24} = \frac{1200}{24}$$

$x = 50$

It is 50%.

50

24 | 1200

1200

0

Oct 23-3:17 PM

5.3

#17 7892, 3972 are over 18

7892

3972 are over 18

$$\frac{N}{100} = \frac{3,972}{7892}$$

$$7892N = 3,972 \cdot 100$$

$$\frac{7892N}{7892} = \frac{397200}{7892}$$

397

It is 50%

$N = 50.3294$

$N = 50$

Oct 23-3:20 PM

52
6 is 3% of what number?

$$\frac{3}{100} = \frac{6}{x}$$

$$\frac{3}{3}x = \frac{600}{3}$$

$$x = 200$$

The number is 200

$$\begin{array}{r} 200 \\ 3 \overline{) 600} \\ \underline{60} \\ 000 \end{array}$$

Oct 23-3:26 PM

\$600 TV 7% tax

$$\left(\frac{7}{100}\right) = \frac{x}{600}$$

$$7.600 = x \cdot 100$$

$$\frac{4200}{100} = \frac{x \cdot 100}{100}$$

The tax is \$42.00

$$\begin{array}{r} 600 \\ \times .07 \\ \hline 42.00 \end{array}$$

$$\begin{array}{r} 600 \\ \times 7 \\ \hline 4200 \end{array}$$

74%
8%

Oct 23-3:28 PM

\$18 is 9% of what number?

$$\frac{9}{100} = \frac{18}{x}$$

What is 9% of 18

$$\frac{9}{100} = \frac{x}{18}$$

It is 9% of \$200.

$$18 = .09x$$

$$\frac{1800}{9} = \frac{9x}{9}$$

$$x = 200$$

Oct 23-3:32 PM

Sales tax is 4% You paid \$5.44 tax on a bicycle. What is the price of the bicycle?

$$\frac{4}{100} = \frac{5.44}{x}$$

$$4x = 100 \cdot 5.44$$

$$\frac{4x}{4} = \frac{544}{4}$$

$$x = 136$$

The bicycle cost \$136.00

I paid \$141.44 for the bike

$$\begin{array}{r} 136 \\ 4 \overline{) 544} \\ \underline{40} \\ 144 \\ \underline{120} \\ 24 \end{array}$$

Oct 23-3:37 PM

Purchase 2 speakers The purchase price was \$197 Sales tax is \$11.82. What is the sales tax rate?

$$\frac{x}{100} = \frac{11.82}{197}$$

$$197x = 11.82 \cdot 100$$

$$\frac{197x}{197} = \frac{1182}{197}$$

$$x = 6$$

The sales tax rate is 6%.

$$\begin{array}{r} 6 \\ 197 \overline{) 1182} \\ \underline{1182} \\ 00 \end{array}$$

Oct 23-3:45 PM

\$250,000 horses sold The agent gets 6%. How much is that?

$$\frac{6}{100} = \frac{x}{250,000}$$

$$6 \cdot 250,000 = 100 \cdot x$$

$$\frac{1,500,000}{100} = \frac{100 \cdot x}{100}$$

$$15,000 = x$$

The agent would get \$15,000.

$$\begin{array}{r} 15,000 \\ 100 \overline{) 1,500,000} \\ \underline{100} \\ 500 \\ \underline{500} \\ 00 \\ \underline{00} \\ 00 \end{array}$$

Oct 23-3:50 PM

The commission on a \$750 sofa is \$105. What is the commission rate?

$$\frac{x}{100} = \frac{105}{750}$$

$$100 \cdot 105 = 750x$$

$$10500 = 750x$$

$$\frac{10500}{750} = \frac{750x}{750}$$

$$14 = x$$

The commission rate is 14%

Oct 23-3:53 PM

5.5 Percent Increase or Decrease

24 people initially in the class. Currently 22 are still enrolled. What percent decrease is this?

$$\frac{24}{100} = \frac{x}{24}$$

$$24x = 2 \cdot 100$$

$$24x = 200$$

$$\frac{24x}{24} = \frac{200}{24}$$

$$x = 8.33$$

The decrease is 8.33%

Oct 23-3:57 PM

\$8 you get a 3% increase in pay. What is your new hourly rate?

$$\frac{3}{100} = \frac{x}{8}$$

$$3 \cdot 8 = 100 \cdot x$$

$$24 = 100x$$

$$\frac{24}{100} = \frac{100x}{100}$$

$$.24 = x$$

The new hourly rate is \$8.24

$$\frac{3}{100} = \frac{x}{23}$$

$$3 \cdot 23 = 100x$$

$$\frac{69}{100} = \frac{100x}{100}$$

$$.69 = x$$

\$23.69

Oct 23-4:02 PM

In 1986, there were 271,000 drunk drivers. By 1997, there was an 89% increase in drunk drivers. How many drunk drivers were processed in 1997?

$$\frac{89}{100} = \frac{x}{271,000}$$

$$100x = 89 \cdot 271,000$$

$$100x = 24,119,000$$

$$\frac{100x}{100} = \frac{24,119,000}{100}$$

$$x = 241,190$$

There were 512,190 drunk drivers processed in 1997.

$$241,190 + 271,000 = 512,190$$

Oct 23-4:07 PM

Shoes for \$35 are on sale for \$28. What is the % decrease in price?

$$\frac{x}{100} = \frac{7}{35}$$

$$35x = 7 \cdot 100$$

$$35x = 700$$

$$\frac{35x}{35} = \frac{700}{35}$$

$$x = 20$$

There is a 20% decrease in price for the shoes.

Oct 23-4:16 PM

9 units at 6.5 used to cost \$26 and now cost \$20, what is the % decrease?

$$\frac{x}{100} = \frac{6}{26}$$

$$26x = 600$$

$$\frac{26x}{26} = \frac{600}{26}$$

$$x = 23.07$$

The decrease in fashion is 23.07% ≈ 23.1%

Oct 23-4:20 PM

$\$20/\text{unit} \xrightarrow{\text{Increased to}} \$35/\text{unit}$
 What percent increase is this for tuition?
 $\frac{x}{100} = \frac{15}{20}$ $20x = 15 \cdot 100$ $\frac{35}{-20}$
 $\frac{20x}{20} = \frac{1500}{20}$ $\frac{1500}{15}$
 $\frac{20 \overline{)1500}}{140}$ $x = 75$ This is 75% increase in tuition
 $\frac{100}{100}$

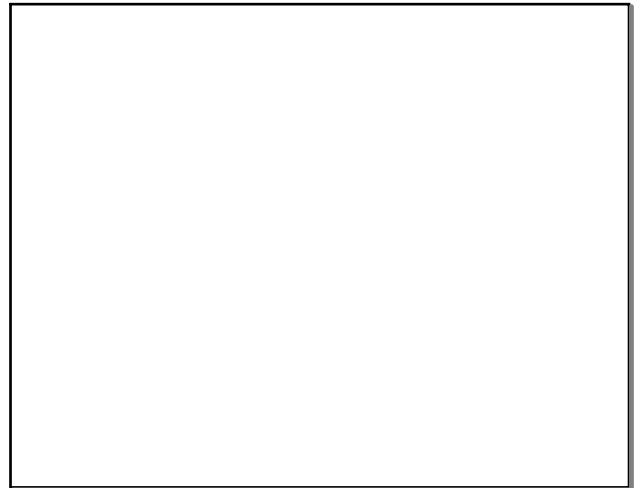
Oct 23-4:28 PM

$\$35 \xrightarrow{\quad} \53.00
 What is this percent increase
 $\frac{x}{100} = \frac{18}{35}$ This increase was 51.4%
 $\frac{35x}{35} = \frac{1800}{35}$ $\frac{35}{35}$
 $x = 51.4$ $\frac{51.4}{175}$
 $\frac{35 \overline{)1800.0}}{175}$ $\frac{150}{35}$
 $\frac{150}{150}$

Oct 23-4:31 PM

$\frac{x}{100} = \frac{5}{100}$ 1:40
 leaving 5% to B
 The class early
 3% to early

Oct 23-4:35 PM



Oct 23-3:31 PM