

50/100 = 50% means 1/2 of 100

1/2 = 50/100 = 50%

.5 = 50% = 50/100 = .5

Section 8.1A Notes: Percents and Sales Tax

Warm Up Question:

A newspaper reports that 64% of 1069 people surveyed said that the president is doing a good job. How many people said the president is doing a good job?

.64 (1069) = 684.16 = 684

64/100 = x/1069

Express as a percent: 1/2 = 50/100 -> 50%

.5 = 50% -> .5

1) Express each fraction as a percent

How many out of 100?

a) 5/8

b) 4/5 = 80/100

c) 4/25 = 16/100

d) 23/20 = 115/100

e) 49/50 = 98/100

0.625

0.8

0.16

1.15

0.98

62.5%

80%

16%

115%

98%

Num is what percent of denom

2) Express each decimal as a percent

a) 0.023

b) 0.45

c) 0.9356

d) 3.1032

e) 0.205

2.3%

45%

93.56%

310.32%

20.5%

.5 = 50%

3) Express each percent as a decimal

a) 67% = 67/100

b) 250% = 2.5

c) 36.4% = .364

d) 0.73% = .0073

e) 3 3/4% = 3.75% = 3.75/100 = .0375

4) Use the percent formula A=PB A is P percent of B, to solve the following problems.

A = P/100 \* B

(2.5/8) \* x/100

a) What percent of 8 is 2.5? 2.5 = P \* 8

P = .3125

31.25%

b) 68% of what number is 374? 374 = .68 X

550

374 is 68% of X 374/X = 68/100

c) 336 is 56% of what number? 336 = .56 X

600

d) 12.3 is what percent of 15? 12.3 = X \* 15

.82 ->

82%

$$A = \frac{PB}{100}$$

5) Suppose a local sales tax rate is 4.5% and you purchase a car for \$28,500.

a) How much sales tax is paid?  $28,500 (.045) = \boxed{\$1282.50}$

b) How much is the total cost of the car?  
 $= 28,500 + .045 (28,500)$   
 Total Cost =  $28,500 (1 + .045)$   
 $\frac{28,500}{1282.50}$   
 $\boxed{\$29,782.50}$

6) Suppose that the local sales tax rate is 6% and you purchase a computer for \$1260.

a) How much sales tax is paid?  $1260 \times .06 = \boxed{\$75.60}$

b) What is the computer's total cost?  
 $1260 + 75.60 = \boxed{\$1335.60}$   
 $= 1260 + .06 (1260)$   
 $= 1260 (1 + .06)$

7) Suppose you go to a restaurant and want to give your waitress a 15% tip. The check total was \$65.00. What is the tip? How much would the total come to?

$65 \times .15 = \$9.75$        $65 + 9.75 = \boxed{\$74.75}$   
 $65 + 65(.15)$   
 $= 65 (1.15)$

8) You went shopping for clothes during a sale. The sale states that it's 60% off original (A = B(1-.6)) prices. The original prices are as follows: \$55 for each pair of pants, \$35 for each shirt, A = B(.4) and \$49 for each sweater. You want 2 pairs of pants, 3 shirts, and one sweater. What is the discounted amount? How much will you pay for the clothes with a 6% sales tax?

SAVINGS

Pants	55	$\times .6 = 33$	$\times 2$	= 66	} Discount Amount
Shirt	35	= 21	$\times 3$	= 63	
Sweater	49	29.40	$\times 1$	= 29.40	
				$\$158.40$	

Original Price =  $55(2) + 35(3) + 49 = 264$   
 $(264 - 158.40) (1 + .06) = 264(.4) [1.06]$   
 $(105.6) (1.06) = \boxed{\$111.94}$

9) A coat that regularly sells for \$225 is on sale for \$168.75. What is the percent decrease of the sale price from regular price?

$\frac{\text{Amount decrease}}{\text{original}} = .25$

amount decrease  $\rightarrow 225 - 168.75 = P 225$   
 $56.25 = .25 (225)$

25% reduction

Check:  $.75 (225) = \boxed{168.75}$

10) A store advertises that it will take 150% off the price of all merchandise. What should happen when you go to the counter to buy a \$500 item?

They give you  $\boxed{\$250}$