TEST on chapter 6 will be on Monday, January 27.
You will use a calculator on this test. It will NOT cover mental math percent strategies or estimating percents of a number

You should be able to solve percent application problems including
 *percent change
 *percent error
 *sales tax, tips, markups
 *discount and sale prices
 *simple interest

You should be comfortable converting back and forth between decimals, percents, and fractions.

You should be able to solve problems like 16 is what percent of 10 or 2 is 7% of what # ?

You should be able to set up a percent proportion to solve a problem. This includes defining the variable in a word ratio.

You should be able to test a claim about a percent and use mathematics to prove it correct or incorrect.

*You may use a calculator. Show steps! Round money to the nearest cent. Otherwise give exact answers. Round to the nearest tenth only if necessary.

1) Jared plans to leave a 15% tip for a meal that cost him $12.69. How much should the tip be to be exactly 15% ?	2)How much will you save on a $48.79 pair of shoes if they are marked 10% off ?
3) How much simple interest will you earn in an account that earns 1.5% interest if you deposit $400 and leave it there 30 months ?	4) Zach earned $160 shoveling snow last month. Jon earned 28.2% more than Zach. How much did Jon earn?

5) 3.5% of the 450 students at Westmont Middle School have red hair. How many students have red hair?	6) Jack received a 12% increase on his hourly wage of $9.80. What is his new hourly wage?	7) 24 is 0.25% of what number ?
8) Jen buys a bag of chips for $2.89 and a bottle of soda for $1.19. How much will it cost her including 6.35% sales tax ?	9) Which of these are equivalent to $\frac{8}{10}$? 0.8% 0.8 80% 8% 0.08% $\frac{80}{1000}$ $\frac{80}{100}$ 8.10 0.18	10) Claire estimates there are 2356 marbles in the jar. There are actually only 2127 marbles. Find her percent error to the nearest tenth of a percent.

11) Last year at Mario's Pizza restaurant a large cheese pizzacost $8.99. It now costs $10.50. Find the percent increase to the nearest tenth of a percent.

12) Mr. Armstrong is a used car salesman. He keeps 7% of his sales as a commission. How much does he have to sell to keep (earn) $2000 ?

13) Three years ago sales tax in Connecticut was 6%. Now it is 6.35%. Find the percent increase to the nearest tenth of a percent.

14) Sara earned $360 interest over 2 years in an account that earned 4.5% yearly interest. How much money did she have in the account at the beginning of this time?

15) A survey at LMS showed the following preferences for students' favorite flavor of ice cream.

Vanilla 24
Chocolate 60
Strawberry 12
Cookies'n Cream 96
Rocky Road 288

A) What percent of the students prefer strawberry ?

B) True OR False ?? Explain your reasoning.
36% of the students chose either strawberry or rocky road.

16) The length of a rectangular shaped classroom is 25 feet. The width is 48% of the length. Find the perimeter of the classroom.

17) Marianne bought a $49 backpack when it was on sale for 30% off. If she must pay 4% salestax, what is her final cost ?

18) At the restaurant Molly paid 0.45 of the bill, Kara paid 15% of the bill, Sue paid $\frac{1}{8}$ of the bill.
Dana will pay the rest.

A) Dana thinks she will pay $\frac{1}{4}$ of the bill. Is she correct? Explain.

B) If the bill is $80, how much will they each pay?

19) Josh wants to buy a new video game.

*Which store has the best price?_____

*How much cheaper is it? _____

Store A	Store B
$24.99	$19.89
30% off	15% off
5.5% tax	6.35% tax

18) Jon borrowed $12,000. He made monthly payments for 5 years of $234 each month. What was the simple interest rate for the loan?

19) Is This Ad Correct?   Show the mathematics you use to prove your answer in the chart below.

At least 40% off !

SPIRAL NOTEBOOK

70 sheets, 8" x 10½"

2/FOR 99¢

Our Regular 87¢ each

20) Is this ad correct? Show the
mathematics you use to prove
your answer in the chart below.

Save 45% off our regular price!

CRAYO CRAYONS

64 count per box

$1.49

Our Regular $2.59

64 Crayons

CRAYONS

21) Which Grade Had the Greater % Increase?
Show the mathematics you use to prove your
answer.

This year's enrollment for 7th grade is
250 students and for 8th grade is 225
students. Last year there were 215 8th
graders and 235 7th graders. Which
grade had the greatest percent increase
in enrollment? _____ How much greater

was the percent increase? _____

22) (% Applications (Defend Headlines Claim)

The headlines in a local paper say, "More than 40% of LMS students are involved in the music program. Does the data support the claim? ____ Explain your reasoning.

LMS Music Program

	# of Students
Band only	80
Chorus only	70
Both band & chorus	50
No band or chorus	250

23) Percent Applications Which of These Work?

Which of these eight equations could be used to correctly find the sale price of an item that is marked 20% off a regular price of $42? Let n = the sale price.

$$0.80(42) = n$$

$$0.20n = 42$$

$$42 - 0.2(42) = n$$

$$0.2(42) = n$$

$$0.80n = 42$$

$$\frac{80}{100} = \frac{n}{42}$$

$$\frac{20}{100} = \frac{n}{42}$$

$$\frac{120}{100} = \frac{n}{42}$$

24) (% Applications) Favorite Lunch

180 seventh grade students were surveyed for their favorite school lunch. The number of students who chose each item was misplaced so Claude is trying to refigure what the number of students who chose each item could have been. His teacher had summarized the data before the actual numbers were lost. Use these statements to come up with a possible number of students who chose each type of lunch. Show the mathematics you use.

_____Pizza

_____Hamburger/Fries

_____Spaghetti/Meatballs

_____Other

_____My own lunch from home

$\dfrac{1}{6}$ chose spaghetti

Less than 10% chose "other"

25% chose Hamburger/Fries

Less than half but more than 45% chose pizza

Less than 5% chose "My own from home"