Name: _____   Date: _____
Period: _____   Midterm Unit Test

Solve each problem completely. Show work where necessary. Box your answers.

1} $4[(15 - 9) + 8(2)^2]$

2} $\dfrac{53 + 15}{17 - 13}$

Give and example of <u>three out of the five</u> properties listed below.

3}

    a} Identity Property of Addition:

    _____

    b} Multiplicative Property of Zero:

    _____

    c} Commutative Property of Multiplication:

    _____

    d} Distributive Property:

    _____

    e} Inverse Property of Multiplication:

    _____

Evaluate completely the exponents below.

4} $9^3 \bullet (9^2)^3$

5} $\dfrac{-55x^2 y}{11xy^3 z^2}$

Write the following number in expanded form.
6} $3,430,00 = -$

_____

Fill in the table below.

Standard Form	Scientific Notation
7} 27,210,000	7}
8}	8} 8.2549×10^{-16}
9} 0. 00004673	9}

For each number listed in the left column, place and X under the type of number(s) that describes it.

Number	Natural	Whole	Integers	Rational	Irrational
10} $0.\overline{3}.$					
11} $\dfrac{3}{4}$					
12} 25					
13} - 0.011238…					

Solve each of the problems below and box your answer. If the answer on the left is greater than the answer on the right, circle the letter "G"; if the answer on the left is less than the answer on the right, circle the letter "L"; if the right and left answers are the same or equivalent, circle the equal (=) sign.

14}
$|-18| - |5|$ **G** $-|4|.|-5|$
        L
        =

15}
   $-17+8+(-14)$ **G** $-35 - (-18)$
                L
                =

16}
$\dfrac{156 \div (-2)}{26}$ **G** $\dfrac{-9(3)}{9}$
          L
          =

17}
   If t = 15   **G**   If k -16
               L
   -6t   **=**   -4k

For each set of numbers, list the GCF in the blank to the left of the numbers and the LCM in the blank to the right of the numbers

     GCF   **LCM**

18} _____   **48 and 54**   _____

GCF   **LCM**

19} _____   **10** $x^2 y^3$ **and** $25xy^2$ _____

Solve the problem below. Show all work. Box your answer.

20} Mrs. X is having a birthday party for her daughter and son. They each went to the store to choose candy for the goodie bags. They bought 48 Snicker bars, 60 bags of M&M's candies and 32 Blow-pops. When they make the goodie bags, how many of each type of candy will go in each bag and how many bags will they be able to make?

21} The Panther team is having a party for Halloween. The guests of this party ate $0.\overline{7}$ of the pizza that was ordered. What would be the fraction representation of this decimal?

22} The Panther team had practice where 15 out of 22 teammates needed to wear red shirts. What is the decimal representation of this fraction?

Write each ratio in simplest, fraction form:

23} 17 to 7 _____   **24}** 15 : 35 _____

25} 22/45 _____

Write the unit rate for each:

26} $\underline{140 \; words}$ **27}** $\underline{\$320}$
      $4 \; mins$ $4 \; people$

Solve each proportion. Show work under each problem.

28} $\dfrac{8}{16} = \dfrac{X}{17}$ **29}** $\dfrac{6}{X} = \dfrac{17}{51}$ **30}** $\dfrac{12}{15} = \dfrac{4}{X}$

Complete the chart. Round to the nearest hundredth if necessary.

	Fraction	Decimal	Percent
31}	$\dfrac{3}{50}$		
32}		0.6	
33}			16%
34}		1.73	

Complete each equation. Show formula (percent eqation!!!), substitution, solution.

35} 42% OF 68 IS _____   **36}** 13 IS 25% OF _____

37} 90% OF _____ IS 85.5   **38}** 9 IS _____% OF 16

Solve each problem. For each, show formula (if needed), work, and solution sentence. (ie. The pie's total cost is $15) round if necessary to the nearest tenth.

39} Martha bought rollerblades that had been discounted 60%. If they originally cost $240, how much will she be paying now?

40} A jacket costs $135.00 and there is a 6.5% dales tax. What is the total cost of the jacket?

41} What is the interest earned on $2,460 if it is invested at 6.25 for 3.5 years.

42} A $545.00 speaker now sells for $393.75. Find the percent of change. Round to the thousandths place.

43} A car dealer sells a luxury car for $75,500 and earns a 2.7% commission on his sale. How much will he earn?

44} Max invests $200 in a vacation savings plan, which will earn 12% interest compounded monthly. If he keeps his money invested for half of a year, how much will he have saved for a vacation?

Be sure to label all items properly.
Geometric Figures: Draw/Name
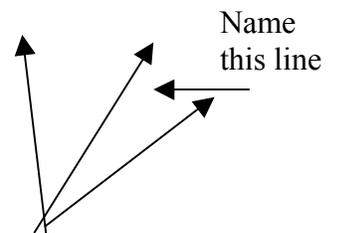**45}** Draw point R   **46}** Draw line $\overleftrightarrow{AB}$ **47}** Draw Angle JKL

48} Name the figure below   **49}** Name the figure below.   **50}** Name the figure below
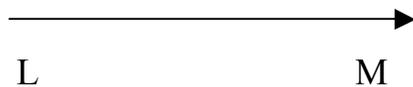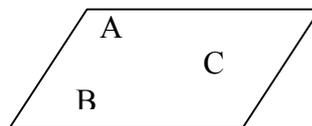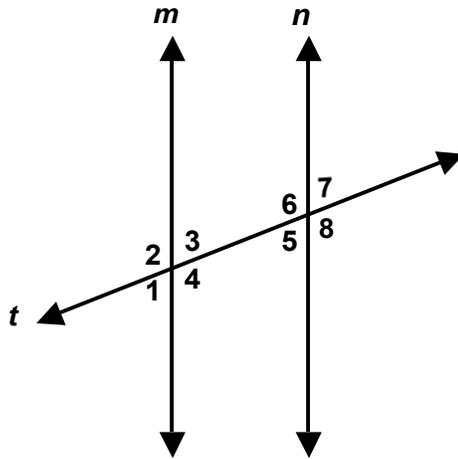
Name this line

L   M

A

C

B

51} For #'s 50 – 55 use the following information below:
In the figure, m ‖ n and t is a transversal. If m< 8 =125o, find the measure of each angle.

52} < 5

53} < 6

54} < 2

55} < 1

56} < 4

57} < 7

m   n

7
6
5   8
2   3
1   4
t

58} < 1 and < 3 are: _____

59} < 4 and < 6 are:_____

60} < 5 and < 4 are: _____

61} < 7 and < 8 are: _____

62} Factor the monomial completely: $-42qr^2s^3$