

Name: _____ Date: _____ Block: _____

Chapter 1 Study Guide

Topics You Need to Know:

Lesson 2: Long Division (DMSCBR- See notes & vocab glued in notebook)

Lesson 3: Exponents (*See Study Guide in Math folder & foldable booklets in notebook)

Lesson 4: Order of Operations (PEMDAS in notebook)

Lesson 5: Math Properties (Vocabulary Foldable glued in notebook)

*Did you go back and look at your past quizzes? That's a great place to start studying!

Hint...hint...nudge...poke...wink ☺

Visit: www.mrsjfindlay.weebly.com for study tools/videos

Lesson 2: Long Division (DMSCBR)

Finding Group Size Using Division

A school wants to separate 364 students into equal-sized homeroom classes. There are 13 classrooms in the school that can be used for a homeroom. How many students will be in each homeroom?

Step 1: Decide where to place the first digit in the quotient.

$$\begin{array}{r} x \\ 13 \overline{)364} \end{array} \quad \text{no} \quad \text{You cannot divide 3 by 13.}$$

$$\begin{array}{r} x \blacksquare \\ 13 \overline{)364} \end{array} \quad \text{yes} \quad \text{You can divide 36 by 13.}$$

So, place the first digit of the quotient in the tens place.

Step 2: Divide the tens. $13 \overline{)36}$

$$\begin{array}{r} 2 \\ 13 \overline{)364} \\ -26 \\ \hline 10 \end{array} \quad \begin{array}{l} \text{Multiply. } 13 \times 2 \\ \text{Subtract. } 36 - 26 \\ \text{Compare. } 10 < 13 \end{array}$$

Step 3: Divide the ones. $13 \overline{)104}$

$$\begin{array}{r} 28 \\ 13 \overline{)364} \\ -26 \\ \hline 104 \\ -104 \\ \hline 0 \end{array} \quad \begin{array}{l} \text{Multiply. } 13 \times 8 \\ \text{Subtract. } 104 - 104 \end{array}$$

So, each homeroom will have 28 students.

You try! Solve.

Can you write your answer 2 ways? ☺

1. $893 \div 7 =$ _____

2. $6,353 \div 18 =$ _____

3. $24,618 \div 53 =$ _____

Lesson 3: Exponents

The diagram shows the equation $7^3 = 7 \times 7 \times 7 = 343$. A red arrow points to the number 7, labeled "Base". A blue arrow points to the number 3, labeled "Exponent". A blue arrow points to the number 343, labeled "Value". A blue arrow points to the expression $7 \times 7 \times 7$, labeled "Expanded Notation". A blue arrow points to the number 7 in the expanded notation, labeled "Exponential Notation".

You Try! Write each in expanded form, then record the value.

4. $3^5 =$ _____ $=$ _____

5. $6^4 =$ _____ $=$ _____

6. $10^7 =$ _____ $=$ _____

7. What is the trick that can be used to help solve base ten exponents without having to do long multiplication? _____

8. Anything to the power of zero will always equal _____.

Compare. Use $<$, $>$, or $=$.

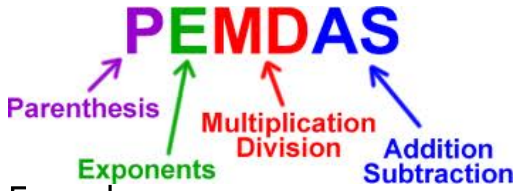
9. 9^1 _____ 1^9

10. 5^4 _____ 6^3

**EXPONENTS
ARE NUMBER
3924⁰!**

11. Do you understand this math meme? Explain.

Lesson 4: Order of Operations



*Remember M & D and A & S are tag teams and go in order from left to right



Examples:

Simplify each expression.

A $3^3 + 8 - 16$
 $3^3 + 8 - 16$
 $27 + 8 - 16$
 $35 - 16$
 19

*There are no parentheses.
 Find the values of numbers with exponents.
 Add
 Subtract.*

B $8 \div (1 + 3) \times 5^2 - 2$
 $8 \div (1 + 3) \times 5^2 - 2$
 $8 \div 4 \times 5^2 - 2$
 $8 \div 4 \times 25 - 2$
 $2 \times 25 - 2$
 $50 - 2$
 48

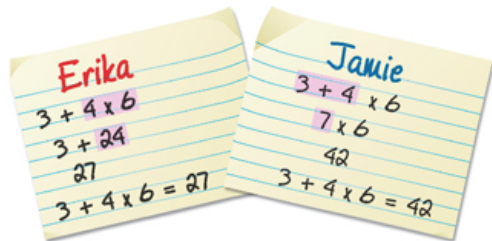
*Perform operations within parentheses.
 Find the values of numbers with exponents.
 Divide.
 Multiply.
 Subtract.*

You Try! Simply (Solve).

12. $6^2 - 18 \div 3 + 15 =$ _____

13. $100 - (3^3 + 5) \div 4 \times 2 =$ _____

14. $(9^2 - 6) \div 3 + 15 =$ _____



15. Which student, Erika or Jamie, is correct? Explain. _____

Lesson 5: Math Properties –Study your Vocabulary Foldables Booklet!

Examples of the Distributive Property

Using the Distributive Property to Multiply

Use the Distributive Property to find each product.

A 4×23

$$\begin{aligned} 4 \times 23 &= 4 \times (20 + 3) && \text{"Break apart" } 23 \text{ into } 20 + 3. \\ &= (4 \times 20) + (4 \times 3) && \text{Use the Distributive Property.} \\ &= 80 + 12 && \text{Use mental math to multiply.} \\ &= 92 && \text{Use mental math to add.} \end{aligned}$$

B 8×74

$$\begin{aligned} 8 \times 74 &= 8 \times (70 + 4) && \text{"Break apart" } 74 \text{ into } 70 + 4. \\ &= (8 \times 70) + (8 \times 4) && \text{Use the Distributive Property.} \\ &= 560 + 32 && \text{Use mental math to multiply.} \\ &= 592 && \text{Use mental math to add.} \end{aligned}$$

16. Rewrite 8×47 using the Distributive Property.

Label Commutative, Associative, Distributive, or Identity AND find the missing value.

17. $(13+17) + n = 13 + (17+11)$

18. $n * 37 = 37 * 42$

19. $19 + n = 19$

20. $5 \times 67 = (5 \times 60) + (5 \times n)$
