Foundations of Algebra Module 1 Study Guide

Number Sense & Quantity



		, ,					
What I	Things to	Practice					
Need to	Remember						
Know	Onden of						
.	Order of	a. $-5+3 \times 4^2 \div 2=$ b. $-4(3^2+1) \div 5+6=$					
with		$-2+3\times16-2$ $-4(9+1)-5+6$					
Integers		-5+48=2 $-4(10)=5+6$ 81					
		-5+24 $-40-7+6=-076$					
		c. How do you know when the d. How do you know when the sum					
		sum of a positive and negative of a positive and negative integer					
		integer will be positive? will be negative?					
		When the positive when the regative					
		integer is bigger integer is bigger than					
		than the regative it besitive interest					
		integer. The positive integer.					
2. Real		a. Represent the scenario with b. Amara jumped off the diving					
World		an integer: board that was 12 feet in the air					
Applications		-You take the elevator to 14 th and went 9 feet below the water's					
Orinnegers		tloor. surface. How far did she fravel?					
		-The temperature is seven $ l \sim - (-l) = \sim l$					
		degrees below zero.					
		Π					
		$=1$ 21 t_{-1}					
2							
3. Decimal		a. Order from least to greatest: b. Compare the following decimals:					
Comparison		0.56 = 0.5					
		2.018, 2.13, 2.36, 0.350					
		2,275,256,2561					
4		a. Plot the following points on the number line					
Decimals		0.45 1.78 2.95 2.6 1.3 1.75 0.16 0.6 2 2.91 2.6 2					
on a		P6					
Number		< + + + + + + + + +					
Line		016 0.45 1.3 1.75 2 2.9[3					
5.		a. Complete the chart below:					
Rounding		Round to Round to Round to Round to Round to Round to					
Decimuls		hundred ten one tenth hundredth thousandth					
		4735.1628 4700 4740 4735 47350 4 2516 478.168					
		258.0751 200 260 25% DSX.1 DSX.08 258.075					
		632.9516 600 630 633 633.0 632.95 632.95					
1							

6. Decimal-		Convert the	following frac	tions	decimo	als, and pe	ercents.	
Fractions-		Fraction	Decimal	Per	cent			
Conversions		5/8	0/05		50/			
		3/8	0.625	6.	2.5/0			
		160= 725	0.24	2	4%			
		33/100	133	3	3%			
		13000 200	.145	14.	5%			
		2/7	0.2857	28	.51%			
7.		a. Order from	least to greate	est:	b. Orde	er from leas	t to greatest:	
Ordering		$\frac{4}{5}, \frac{4}{10}, \frac{4}{12}, \frac{4}{7}$			$\frac{5}{9}, \frac{7}{13}, \frac{2}{7}$	2 <u>10</u> 7' 11		
Tuenons		4 4	4.4		7	2	5 10	
		5 5	÷ ; ; ;		13	γ'	a	
		12 10	15		•	•	()	
11. Converting		a. Convert to	improper fract	ions:	b. Con	vert to mixe	ed numbers:	
Between		,3	₇ 3 _	31	27	2-	13	3
Improper			$\frac{7}{4}$ -	<u>IL</u>	8 7	\mathbb{R}	$\overline{5}$	Õ
Mixed		8		T		\sim \sim		
Numbers				_				-
12. Operations		a. Add or Sub			D. MUIII			
with		$\frac{5}{5} - \frac{1}{3} =$			$\frac{1}{10} \times \frac{1}{2}$	$\frac{1}{2} = \frac{1}{2}$		-
Fractions		5 5 5	15 12	5			0 (15	
			(-					
						•		
		3 1 2	<u>+5</u> [r	ן ר	$\frac{2}{2} \cdot \frac{1}{2}$	- 27	< 6 <u>-</u> 12	L
		$\frac{1}{5} + \frac{1}{4} = 2$			5 6	5	1-15	
		~	~ la				122	7
							ヨンモ	-
				2				2
		$2^{2}_{1}^{4}$	5-1.	5	$6\frac{4}{-} \div \frac{1}{-}$	-= 34	+x2	
		3 4	3 4.3	2	5 2	6		
	_	32 - 2	20		1	0 0		
	_		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2	26	j <u>8</u>	. 3	
		ia la	12 061	ム	6	5 =	してし	
		$12\frac{1}{-8}=23$	25 21	.7		(
		7 3						
		31	1 3	.7				
	255-	182-6	7 1 4		1			
	$\overline{\frown}$		132	ī				
	a			Ľ				

13. Operations with Fractions (Word Problems)	a. A stack of board is 21 inches high. Each board is $1\frac{3}{4}$ inches thick. How many boards are there? $21 \div 14$ = 12 There are 12 boards.	b. DJ Gabe is going to serve $\frac{1}{3}$ of a whole pizza to each guest at his party. If he expects 24 guests, how many pizzas will he need? $\frac{1}{3} \times 24 = 8$ T He will need 8 pizzas.
	c. $3\frac{1}{3}$ feet are cut off a board that is $12\frac{1}{4}$ feet long. How long is the remaining part of the board? 124 - 33 3.49 - 10.4 3.49 - 10.4 3.49 - 10.4 3.49 - 10.4 3.49 - 10.4 3.49 - 10.4 3.49 - 10.4	d. $\frac{3}{8}$ of the corn in the US is grown in Iowa. $\frac{1}{4}$ of it is grown is Nebraska. How much of the corn supply is grown in the two states? $3 + 1 \cdot 2 = 3 + 2$ $8 + 4 \cdot 2 = 8 + 8$ $8 + 4 \cdot 2 = 8 + 8$ $8 + 4 \cdot 2 = 8 + 8$ $8 + 4 \cdot 2 = 8 + 8$
14. Estimating Square Roots	a. $\sqrt{43}$ is between what two whole numbers? 143 'IS between 6 and 7	b. $\sqrt{71}$ is between what two whole numbers? $\sqrt{74}$ is between 8 and 9.
	c. Estimate $\sqrt{31}$. Use the number line below and explain your estimation.	d. Estimate $\sqrt{53}$. Use the number line below and applyin your estimation.