LESSON	Greatest Common Factor Practice and Problem Solving: A/B							
Z-1								
List the	e factors of each nu	mber.						
1. 5		2.	15	3	8. 60			
4. 6		5.	12	6	5. 36			
Find th	e greatest common	factor (GCF) for each pai	ir of numbers	·			
7.6a	ind 9	8.	4 and 8	9	. 8 and 12			
10. 6 a	ind 15	11.	10 and 15	12	2. 9 and 12			
Write tl anothe	he sum of the numb r sum.	ers as tl	ne product of the	ir GCF and				
13. 44	+ 40 =		14. 1	5 + 81 =				
15. 13	+ 52 =		16. 6	64 + 28 =				
Solve.								

- 17. A jewelry maker will use 24 jade beads and 30 teak beads to make necklaces. Each necklace will have the same numbers of jade beads and teak beads. What is the greatest number of necklaces she can make? How many beads of each type are on each necklace?
- The marine-life store would like to set up fish tanks that contain equal numbers of angel fish, swordtails, and guppies. What is the greatest number of tanks that can be set up if the store has 12 angel fish, 24 swordtails, and 30 guppies?

LESSON Least	Common Multiple	9			
2-2 Practice and Problem Solving: A/B		g: A/B			
List the first three	multiples of each number				
1. 3	2. 7	3. 12	4. 200		
Find the least com	nmon multiple (LCM).				
5. 2 and 3	6. 4 and 5		7. 6 and 7		
2:	4:		6:		
3:	5:		7:		
8. 2, 3, and 4	9. 5, 6, and	7	10. 8, 9, and 10		
2:	5:		8:		
3:	6:		9:		
4:	7:		10:		

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Solve.

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- 11. Sixty people are invited to a party. There are 24 cups in a package and 18 napkins in a package. What is the least number of packages of cups and napkins that can be bought if each party guest gets one cup and one napkin?
- 12. The science club sponsor is ordering caps and shirts for the boys and girls in the science club. There are 45 science club members. If the caps come in packages of 3 and the shirts come in packages of 5, what is the least number of packages of caps and shirts that will need to be ordered?
- 13. Some hot dogs come in packages of 8. Why would a baker of hot dog buns package 7 hot dog buns to a package?

14. How are the GCF and the LCM alike and different?

Factors and Multiples Challenge

One month is the name for the time it takes the moon to orbit Earth one time. A month is about 30 days. Planet Alpha in another star system has 6 moons, which orbit the planet in the times given in the table.

The Moons of Planet Alpha				
Beta	10 days			
Delta	7 days			
Epsilon	8 days			
Gamma	13 days			
Kappa	26 days			

Complete the table to show the number of orbits it will take for the moons of Planet Alpha to form a straight line with Planet Alpha and the planetary system's star. See the hint below the table for completing the last row.

Planet Alpha Moons	LCM of Months	Number of Orbits of Each Moon
Beta and Delta	1	2. Beta:; 3. Delta:
Delta and Epsilon	4	5. Delta:; 6. Epsilon:
Delta, Gamma, and Epsilon	7	8. Delta:; 9. Epsilon:; 10. Gamma:
Gamma and Kappa	11	12. Gamma:; 13. Kappa:
All 5 moons	14	15. Beta:; 16. Delta:; 17. Epsilon:; 18. Gamma:; 19. Kappa:

(*Hint:* To find the LCM of the months of all 5 planets, divide all of the months that are divisible by 2. Keep dividing the months that are divisible by 2 until you get 1. Do the same for all of the months that are divisible by any other numbers, like 7 and 13. When you are unable to divide another number, multiply all of the divisors you used to get the LCM.)