Date _____ Class ____

LESSON Problem Solving 5-1 Least Common Multiple

Use the table to answer the questions.

- **1.** You want to have an equal number of plastic cups and paper plates. What is the least number of packs of each you can buy?
- 2. You want to invite 48 people to a party. What is the least number of packs of invitations and napkins you should buy to have one for each person and none left over?

Party Supplies				
Item	Number per Pack			
Invitations	12			
Balloons	30			
Paper plates	10			
Paper napkins	24			
Plastic cups	15			
Noise makers	5			

Circle the letter of the correct answer.

- 3. You want to have an equal number of noisemakers and balloons at your party. What is the least number of packs of each you can buy?
 - A 1 pack of balloons and 1 pack of noise makers
 - **B** 1 pack of balloons and 2 packs of noise makers
 - **C** 1 pack of balloons and 6 packs of noise makers
 - **D** 6 packs of balloons and 1 pack of noise makers
- 5. The LCM for three items listed in the table is 60 packs. Which of the following are those three items?
 - A balloons, plates, noise makers
 - **B** noise makers, invitations, balloons
 - C napkins, cups, plates
 - D balloons, napkins, plates

- 4. You bought an equal number of packs of plates and cups so that each of your 20 guests would have 3 cups and 2 plates. How many packs of each item did you buy?
 - F 1 pack of cups and 1 pack of plates
 - G 3 packs of cups and 4 packs of plates
 - H 4 packs of cups and 3 packs of plates
 - J 4 packs of cups and 4 packs of plates
- 6. To have one of each item for 120 party guests, you buy 10 packs of one item and 24 packs of the other. What are those two items?
 - **F** plates and invitations
 - **G** balloons and cups
 - H napkins and plates
 - J invitations and noise makers

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LESSON Challenge	LESSON Problem Solving				
We measure and month by our mean's orbit	ital paviad as the time it	Least Common			
takes the Moon to travel once around Earth, which is about 30 days.		1. You want to have an equal number of			
But what if you lived on Neptune? It has 8 moons! How could you		plastic cups and paper	plates. What	Party S	upplies
is to calculate one month based on when tw	wo of Neptune's moons	is the least number of p you can buy?	acks of each	Item	per Pack
are in conjunction at some arbitrary starting p	point in the sky, or appear	3 nacks of niates and		Invitations	12
of the moons you could use to measure you	ur months on Neptune.	0 packs of plates and		Balloons	30
		2 packs of cups		Paper plates	10
		 You want to invite 48 per party. What is the least 	opie to a number of	Paper napkins	24
Galatea	a: Orbital Period = about 10 hours	packs of invitations and	napkins you	Plastic cups	15
7		should buy to have one person and none left ov	for each er?	Noise makers	5
	600	A nacko of invitations	and		
C Naia	ad: Orbital Period = about 7 hours		allu		
	Despina: Orbital Period = about 8 hours	2 packs of napkins			
		Circle the letter of the cor	rect answer.		
	Larissa: Orbital Period = about 13 hours	3. You want to have an eq	ual number of	4. You bought an ed	qual number of
Neptune		party. What is the least	number of	each of your 20 d	quests would have
	Proteus: Orbital Period = about 26 hours	packs of each you can	ouy?	3 cups and 2 pla	tes. How many
Use the diagram and least common mult	tiples to complete	A 1 pack of balloons ar	nd 1 pack of	F 1 pack of current	m did you buy? and 1 pack of plates
the chart below. For each row, write how long your month on Neptune would be if you used those moons in conjunction as		B 1 pack of balloons ar	ld 2 packs of	G 3 packs of cur	is and 4 packs of
the length of one month.		noise makers	1	plates	- F
	1	C 1 pack of balloons ar	nd 6 packs of	H 4 packs of cup	is and 3 packs of
Neptune Moons to Use	Length of One Neptune Month	D 6 packs of balloons a	ind 1 pack of	J 4 packs of our	s and 4 packs of
Naiad and Despina	about 56 hours	noise makers	and i paon of	plates	o and i paono oi
Larissa and Proteus	about 26 hours	5. The LCM for three item:	s listed in the	6. To have one of ea	ach item for 120 party
Galatea and Despina	about 40 hours	table is 60 packs. Which	n of the	guests, you buy 1	0 packs of one item
Despina and Proteus	about 104 nours	A balloons, plates, nois	e makers	those two items?	le other. What are
		(B) noise makers, invitati	ons, balloons	F plates and invi	tations
		C napkins, cups, plates		G balloons and c	ups
		D balloons, napkins, pla	ates	H napkins and p	ates
				J Invitations and	noise makers
	7				
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Beading Strategies		Puzzles. Tw	isters & Te	asers	
5-1 Understanding Vocabulary		5-1 Math Abbreviation			
Least means the smallest in size. The person with the least amount		Draw a line from each pai	r of numbers to	common multiples fo	or
of homework has the smallest amount of w	vork to do.	the numbers. Sometimes	you will need to	draw two lines from	
Common means shared. You may have cla	asses in common with	the same pair of numbers	•		
A multiple is the answer to a multiplication	problem	When you have finished,	you will see a fa	mous math	
The multiples of 5 are the answers to multiplication	plying numbers by 5	abbreviation.			
$1 \times 5 = 5$ $2 \times 5 = 10$ $3 \times 5 = 15$ 4×5	\times 5 - 20		(8, 12)	96 20	40
The least common multiple is the smalles	$\sim 3 - 20$	45		·····	/
have in common.		15	36		
Follow the steps for finding the least co	mmon multiple of	2		``	25
5 and 10.				12	
1. List the first 10 multiplies of 5.		33			(7, 5)
5, 10, 15, 20, 25, 30, 35, 40, 45, 5	50		4	15	
<u>-, 10, 10, 20, 20, 00, 00, 40, 40, 6</u>		2/			56
 List the first 5 multiples of 10. 		↓			-
<u>10, 20, 30, 40, 50</u>		(6, 9) 18	24	74 15	(4, 10)
3. What multiples do 5 and 10 have in cor		1			
	mmon?				
10, 20, 30. 40. 50	mmon?				
<u>10, 20, 30, 40, 50</u>	nmon?				
10, 20, 30, 40, 50 4. Write the smallest multiple that 5 and 1	mmon? 0 have in common. <u>10</u>				
10, 20, 30, 40, 504. Write the smallest multiple that 5 and 15. What is the least common multiple of 5	mmon? 0 have in common. <u>10</u> 5 and 10? <u>10</u>				
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