Learning Opportunity Name: _____
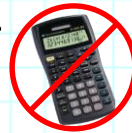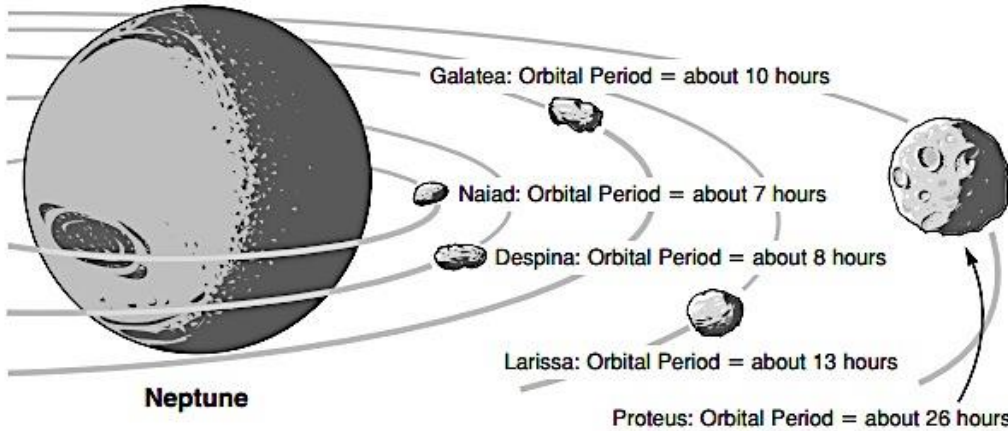
Problem solving using GCF and LCM

We measure one month by our moon's orbital period, the time it takes the Moon to travel once around the Earth, which is about 30 days. What if you lived on Neptune? It has 8 moons! How could you pick just one moon to measure your months? One possible solution is to calculate one month based on when two of Neptune's moons are aligned at some arbitrary starting place in the sky. The diagram below shows some of the moons you could use to measure your months on Neptune.

Galatea: Orbital Period = about 10 hours

Naiad: Orbital Period = about 7 hours

Despina: Orbital Period = about 8 hours

Larissa: Orbital Period = about 13 hours

Neptune

Proteus: Orbital Period = about 26 hours

Use the diagram above to complete the table below. For each row, write how long your month on Neptune would be if you used the alignment of the moons listed as the length of one month.

Neptune Moons to Use	Length of One Neptune Month
1) Naiad and Despina	
2) Larissa and Proteus	
3) Galatea and Despina	
4) Despina and Proteus	

5) Brooke is making a matching necklace and dangle earrings for her best friend. The length of the necklace will be 66 centimeters long and the length of the earrings will be 8 centimeters long. If Brooke wants to use the same size beads for the necklace and earrings, what is the largest size bead she could use to create both the necklace and the earrings?

6) A group of CSN teachers attended a math conference. At the conference, there were 96 teachers from the United States, 72 teachers from Canada, and 48 teachers from Mexico. During one of the presentations, the teachers were assigned to discussion groups. The conference organizers wanted each group to consist of teachers from all three countries and wanted the make-up of each group to be the same. The organizers also wanted to create the largest number of groups possible.

How many groups can be made, and how many teachers from each country will be in each group?

7) Devon's pet snake enjoys a diet of mice and crickets. Devon feeds the snake a mouse and a cricket once a week. Devon goes to Slithery Pet-a-Rama to purchase food for his snake and notices the specials posted below.

Special Offer!

Snake snacks

Live Mice
9 in a box for $2.50

Live Crickets
21 in a box for $2.00

What is the least number of boxes Devon needs to purchase so that there is exactly 1 cricket for every mouse? How much money will he spend if he buys this many boxes?