Math Readiness for College and Careers

Summer Work

1. A clothing store has a promotion going where:
Every 4th customer receives 5% discount….Every 5th customer receives 10%
discount….Every 6th customer receives 15% discount. And if the customer falls on two
or even three categories, they would receive both or all discounts.

- If a sweater costs $120, how much would the 12th customer have to pay?
- How much would the sweater cost if he was the 30th customer?
- How about the 60th customer?
- If the next day the store had a sale of 50% off the original and 20% off that, would you be better taking that deal or getting 70% off the original price?

2. If you are trying to build a rectangular garden with 128 feet of fencing, what is the greatest possible area you can create? Show your work.

- If you were to build a moat instead (circle), and use the 128 feet of fencing, what would the area be? Use 3.14 for Pi. Show your work.

3. Mike decides he wants to start collecting quarters to save up money. He grabs a big jar and starts by dropping in 10 quarters he had on his dresser. Each day Mike will add 2 quarters to the jar that he will save by making his coffee and not buying it at work.

- How many quarters would you have in the jar after 40 days? How much money does he have?
- Write an algebraic equation for the amount of quarters in a jar.
- If you have $27.50 in the jar, what number day are you on?

4. At Johnny's Burger Place, a customer can get a customized meal by ordering either a turkey burger, cheeseburger, hamburger, or veggie burger with a side order of onion rings or french fries with a choice of either coke, sprite or iced tea.

- Use a tree diagram below to list all the different combinations of a burger, side order and a drink.
- Describe ways and give examples of how Johnny could change his menu so that a customer would have 32 different choices.