## PATTERNS AND ALGEBRA

## Recognize, Create, and Extend a Variety of Patterns and Functions

**Directions:** Work independently and solve the problem below. Then compare and discuss your answers with others in your group. Finally, make changes so that you have a correct answer.

**The Task:** John, Paulo, and Ghaurv work for Starr Toys as quality control inspection managers. Today their crews will be inspecting a new action figure called Super Hero Math Crusader! John's crew pulls every 15th figure (starting with the 15th) that comes off the line to inspect for packaging defects. Paulo's crew pulls every 20th figure (starting with the 20th) off the line to inspect for manufacturing defects. Ghaurv's crew pulls every 25th figure (starting with the 25th) off the line to inspect for fire safety defects.

- Which is the first figure to be inspected by all three inspection crews? Explain how you arrived at your answer.

The Starr Toy factory is able to produce 225 of these toys an hour. They keep the factory open twelve hours a day.

- How many Super Hero Math Crusaders will be inspected by all three inspection crews by the end of one work day?

11% of the Super Hero Math Crusaders inspected in one work day by all three inspectors are found to have some type of defect.

- How many Crusaders **without** defects from the entire production line can Ms. Starr expect will be available for shipping after one day of production?