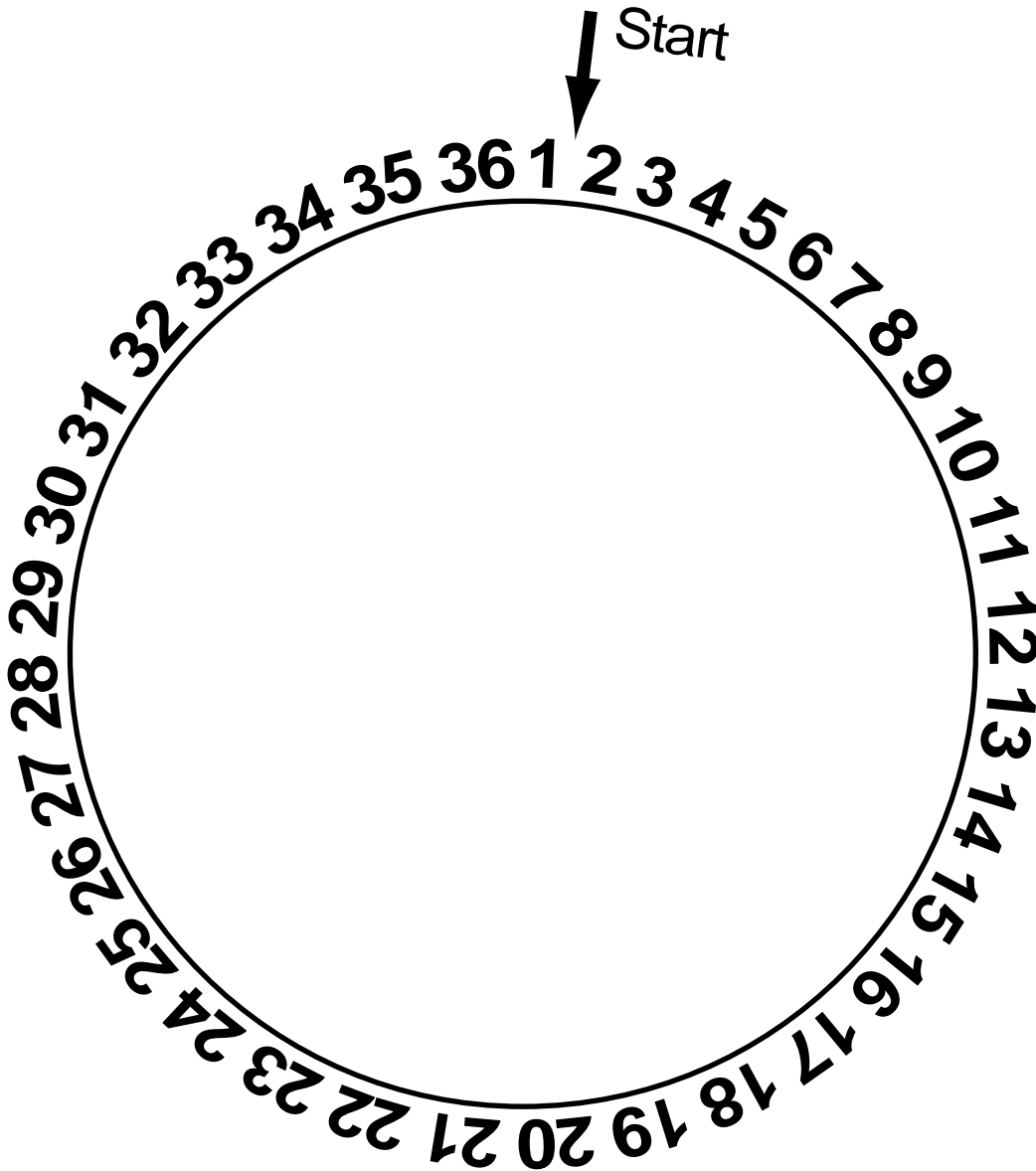


DRAW A PICTURE WORD PROBLEM

One day our class went on a field trip to see how soda pop was bottled. We got to see the bottle capping machine at the end of the tour. It was a circular device which held 36 bottles equally spaced around the outside.

We decided to try to figure out how long it would take to cap all 36 bottles. We started timing right after the top was put on the first bottle and found that it took 10 seconds until the ninth bottle was capped.

How long will it take to cap them all?



DRAW A PICTURE

Teaching Directions

1. Make an overhead copy of the DRAW A PICTURE WORD PROBLEM.
2. Duplicate and distribute a copy of the problem for DRAW A PICTURE WORD PROBLEM to each student.
3. Display a copy of the problem on the overhead projector.
4. Ask the students to follow along as you read the problem aloud.
5. After reading the problem, go through the **Guided Lesson** with the students.
6. As the students work on their own copy, solve the problem on the overhead projector.
7. The **T** below represents your words. The **S** below represents the possible student responses during the lesson. Of course, the **S** response only indicates what a student might say. Obviously, each class discussion will be unique.

Guided Lesson

T: *What is happening in the problem?*

S: The class is visiting a soda pop bottling factory. They are watching the bottle capping machine.

T: *What do the students in the class want to find out?*

S: How long it will take the machine to cap all 36 bottles.

T: *On your paper there is a circle drawn with numbers around it. What could these represent?*

S: The capping machine and the 36 bottles.

T: *What information does the class have about the time it takes to cap the bottles?*

S: It took 10 seconds from the time right after the first bottle to right after the ninth bottle.

T: *How could we show that information on our picture?*

S: Draw a line right after bottle number one and right after bottle number nine. Write "10 seconds" between those two lines.

T: *How many bottles were actually capped in those 10 seconds?*

S: Eight bottles.

T: *How many groups of eight bottles are there on the machine?*

S: Three more groups or four groups altogether.

T: *Draw lines on your picture to show the four groups of eight bottles. How many bottles are left over that don't fit in the groups of eight?*

S: Four bottles.

T: *If it takes 10 seconds for the first eight bottles, how long will it take for the next eight?*

S: Ten seconds

T: *Indicate that information by drawing a curved line between bottle number nine and bottle number 17. Write "10 seconds" above that line. Indicate 10 seconds for the next set of eight bottles and then for the final set of eight bottles. What about the remaining four bottles? How long will it take to cap those bottles?*

S: Since it takes 10 seconds to cap eight bottles, it should take five seconds to cap four bottles.

T: *Indicate that time on your drawing. Now look back at the problem, what question were you asked?*

S: How long will it take to cap all 36 bottles?

T: *Can you answer that question from your drawing?*

S: Yes, there are four groups of 10 seconds, and one group of five seconds, so it will take 45 seconds.

T: *That's right. You have used the DRAW A PICTURE strategy to solve this problem. Remember there are many types of pictures that can be used to solve problems. There is not just one right picture.*