

Name \_\_\_\_\_

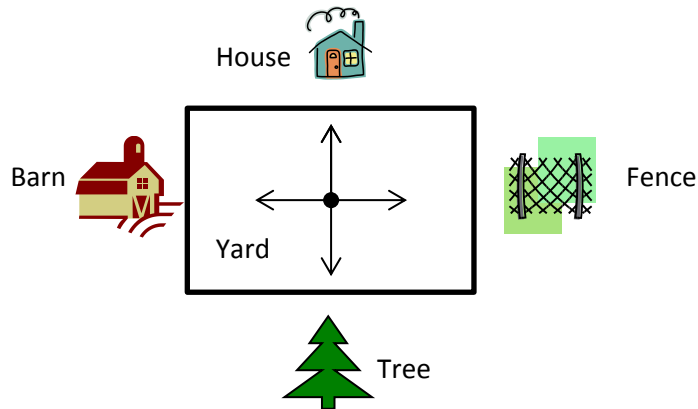
Date \_\_\_\_\_

1. Jill, Shyan, and Barb stood in the middle of the yard and faced the barn. Jill turned  $90^\circ$  to the right. Shyan turned  $180^\circ$  to the left. Barb turned  $270^\circ$  to the left. Name the object that each girl is now facing.

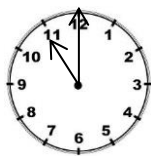
Jill \_\_\_\_\_

Shyan \_\_\_\_\_

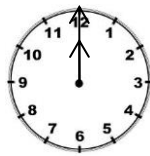
Barb \_\_\_\_\_



2. Allison looked at the clock at the beginning of class and at the end of class. How many degrees did the minute hand turn from the beginning of class until the end?



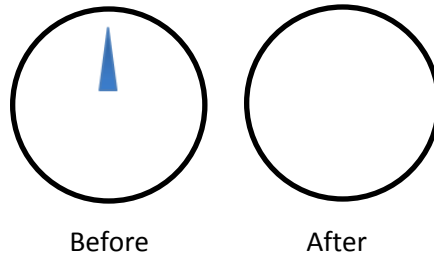
Beginning



End

3. The snowboarder went off a jump and did a  $180^\circ$ . In which direction was the snowboarder facing when he landed? How do you know?
4. As she drove down the icy road, Mrs. Campbell slammed on her brakes. Her car did a  $360^\circ$ . Explain what happened to Mrs. Campbell's car.

5. Jonah turned the knob of the stove two quarter-turns. Draw a picture showing the position of the knob after he turned it.



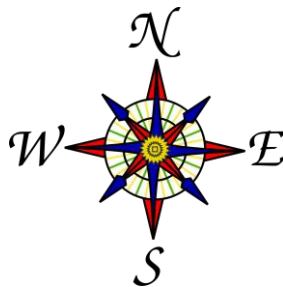
6. Betsy used her scissors to cut out a coupon from the newspaper. How many total quarter-turns will she need to rotate the paper in order to cut out the entire coupon?

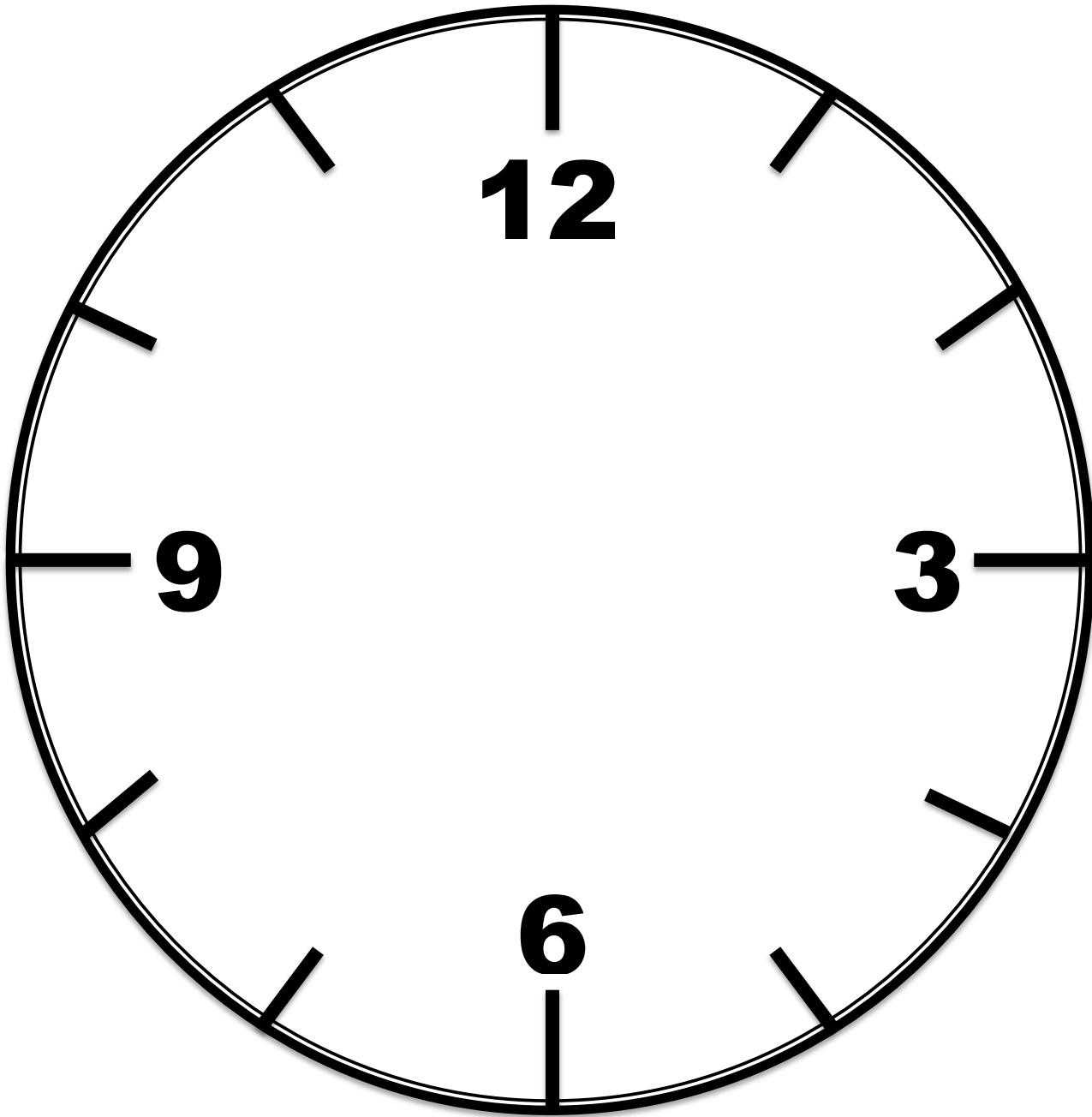


7. How many quarter-turns does the picture need to be rotated in order for it to be upright?



8. David faced north. He turned  $180^\circ$  to the right, and then  $270^\circ$  to the left. In which direction is he now facing?





\_\_\_\_\_

clock