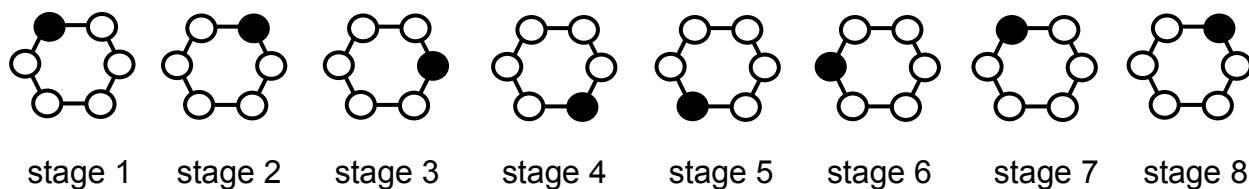


## 8. Sequence Sleuth 2

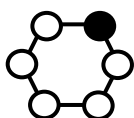
1. Look at the pattern to answer the questions below.



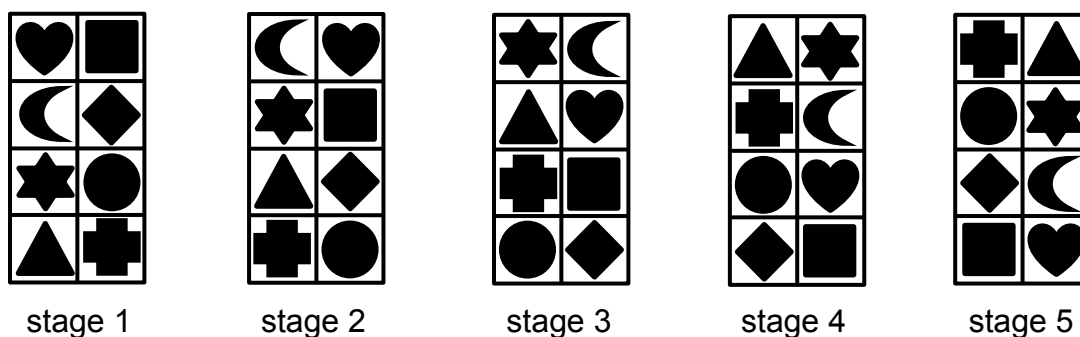
a. List all stage numbers less than 40 that have the following figure.

b. Draw the figure for stage 22.

c. Draw the figure for stage 36.



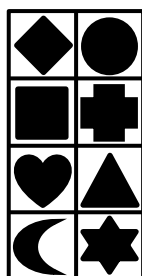
2. Look at the pattern to answer the questions below.



a. List all stage numbers less than 50 that have the following figure.

b. Draw the figure for stage 14.

c. Draw the figure for stage 24.



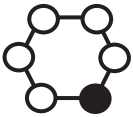
# Answers

## 8. Sequence Sleuth 2 (p. 10)

**1a. 2, 8, 14, 20, 26, 32, 38**

Of the first 8 stages shown, stage 2 and stage 8 match the figure in 1a. The figure repeats itself every 6 stages, so you keep adding 6 to get the remaining stage numbers that match the figure in 1a: 2, 8, 14, 20, 26, 32, 38.

**1b.**



Since the figure repeats itself every 6 stages, stage 22 is identical to stages 16, 10, and 4. So the answer is the figure shown in stage 4.

**1c.**



Since the figure repeats itself every 6 stages, stage 36 is identical to stages 30, 24, 18, 12, and 6. So the answer is the figure shown in stage 6.

**2a. 7, 15, 23, 31, 39, 47**

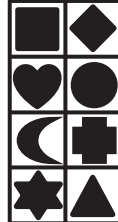
When you increase the stage number by 1, each shape moves 1 space in a clockwise direction. So the figure in question 2a corresponds to stage 7 and the pattern repeats every 8 stages.

**2b.**



Since the figure repeats every 8 stages, stage 14 is identical to stage 6. If you take stage 5 and move each shape 1 space clockwise you get stage 6.

**2c.**



Since the figure repeats every 8 stages, stage 24 is identical to stage 16 and stage 8. If you take stage 7 (shown in 2a) and move each shape 1 space clockwise you get stage 8.