

## Just in Time Quick Check

### Standard of Learning K.PFA.1

#### **Strand:** Patterns, Functions, and Algebra

#### **Standard of Learning K.PFA.1**

**The student will identify, describe, extend, and create simple repeating patterns using various representations.**

*Students will demonstrate the following Knowledge and Skills:*

- a) Identify and describe the core found in repeating patterns.
- b) Extend a repeating pattern by adding at least two complete repetitions of the core to the pattern.
- c) Create and describe a repeating pattern using objects, colors, sounds, movements, or pictures.

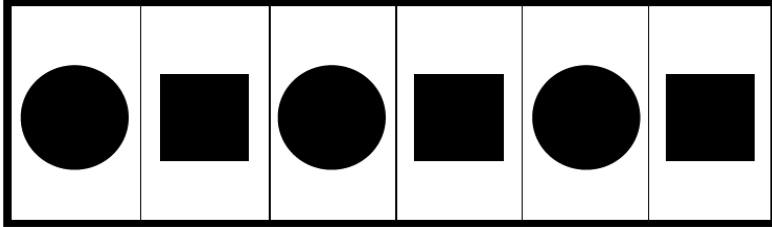
#### Just in Time Quick Check

#### Just in Time Quick Check Teacher Notes

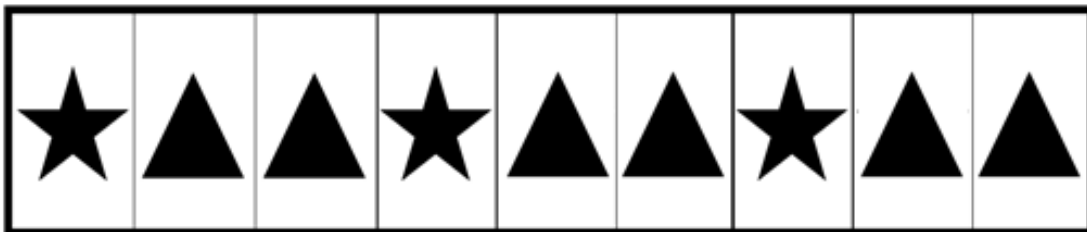
**Supporting and Prerequisite SOL:** N/A

K.PFA.1 Just in Time Quick Check: Student Interview

Pattern Strip A



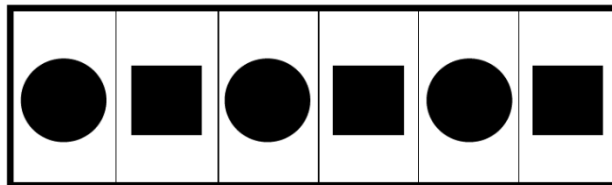
Pattern Strip B



Teacher Note: For this interview, you will need Pattern Strips A and B from page 2 (for questions 1 and 2) and any type of manipulative with a variety of characteristics to create a pattern (for questions 3 and 4).

1. Show the student Pattern Strip A. Ask the following questions:

- a) Can you tell me the core (the part of the sequence that repeats) in this pattern?
- b) Can you continue the pattern? (Have the student continue the pattern for at least two repetitions of the core.)

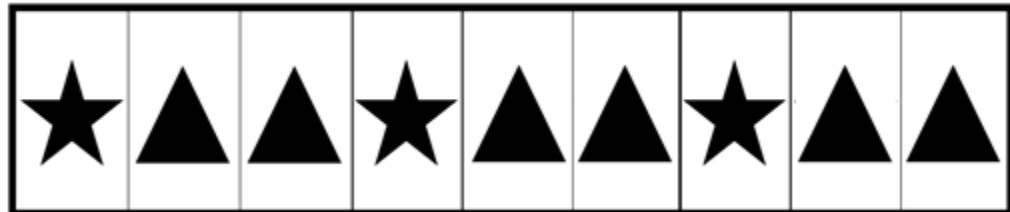


**Student Response:**

- a)
- b)

2. Have the student look at Pattern Strip B. Ask the following questions.

- a) Can you tell me the core (the part of the sequence that repeats) of this pattern?
- b) Can you extend/continue the pattern? (Have the student extend the pattern for at least two repetitions of the core.)



**Student Response:**

- a)
- b)

3. Provide manipulatives of various sizes, shapes, and/or colors to the student. Ask the student to use some of these objects to create a repeating pattern.

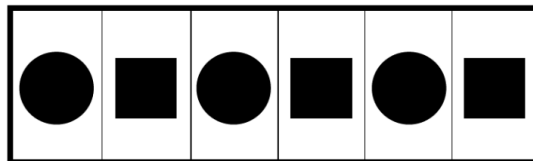
**Student Response:**

## Just in Time Quick Check Teacher Notes K.PFA.1

### Common Errors/Misconceptions and their Possible Indications

Teacher Note: For this interview, you will need Pattern Strips A and B from page 2 (for questions 1 and 2) and any type of manipulative with a variety of characteristics to create a pattern (for questions 3 and 4).

1. Show the student Pattern Strip A. Ask the following questions:
  - a) Can you tell me the core (the part of the sequence that repeats) in this pattern?
  - b) Can you continue the pattern? (Have the student continue the pattern for at least two repetitions of the core.)



*Students who are unable to remember what the core means may need to be reminded that the core is the part of the sequence or pattern that repeats. If students are unable to name the core for Pattern Strip A, they will need additional experience identifying patterns and describing what stays the same in a repeating pattern using a variety of symbols, shapes, movements, and objects. When working with repeating patterns, it may be helpful to have students circle or highlight the core so they can see what part of the pattern repeats.*

*It is possible that students who struggle to identify the core may also have difficulty extending the pattern with a minimum of two core repetitions. Some students may extend the pattern by only two shapes instead of two repetitions of the core; at this level, it is appropriate to ask students to continue adding to the pattern to ensure that they are able to build at least two repetitions. The teacher may have to remind students they are using the core to extend the pattern and not just the individual shapes.*

2. Have the student look at Pattern Strip B. Ask the following questions.
  - a) Can you tell me the core (the part of the sequence that repeats) of this pattern?
  - b) Can you extend/continue the pattern? (Have the student extend the pattern for at least two repetitions of the core.)



*Students who are unable to remember what the core means may need to be reminded that the core is the part of the sequence or pattern that repeats. If students are unable to name the core for Pattern Strip B, they will need additional experience identifying patterns and describing what stays the same in a repeating pattern using a variety of symbols, shapes, movements, and objects. When working with repeating patterns, it may be helpful to have students circle or highlight the core so they can see what part of the pattern repeats.*

*It is possible that students who struggle to identify the core may also have difficulty extending the pattern with a minimum of two core repetitions. Some students may extend the pattern by only two shapes instead of two repetitions of the core; at this level, it is appropriate to ask students to continue adding to the pattern to ensure that they are able to build at least two repetitions. The teacher may have to remind students they are using the core to extend the pattern and not just the individual shapes.*

3. Provide manipulatives of various sizes, shapes, and/or colors to the student. Ask the student to use some of these objects to create a repeating pattern.

*Some students may struggle to create a repeating pattern or may place a few shapes that do not build a repeating pattern. To determine further what they know, it may be helpful to ask students to tell you about their pattern. Students who cannot create a repeating pattern will need opportunities to identify repeating patterns in their environment as well as additional experiences building repeating patterns. They will likely benefit from opportunities to notice repeating patterns in their classroom or home and to participate in discussions that focus on what stays the same, what is different.*