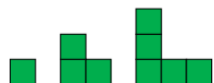# Activity 9 Assessment
Consolidation
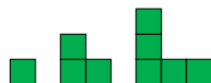
Generalizing and Representing Increasing and Decreasing Patterns

Recognizes that a pattern increases or decreases	Identifies how a pattern changes (describes rule)	Represents patterns symbolically and writes rules using addition or subtraction	Extends patterns using repeated addition and subtraction
"The terms are getting bigger."	"It grows by 2 tiles each time."	1, 3, 5, … "Start at 1 and add 2 each time." 17, 14, 11, … "Start at 17 and take away 3 each time."	$357 - 9 = 348$ $357 - 12 = 345$ $357 - 15 = 342$ $357 - 18 = 339$ "I added 3 to the number taken away and subtracted 3 from the difference."

Observations/Documentation

Finds missing terms or errors in patterns	Creates patterns and explains pattern rules	Uses patterns to solve problems	Identifies and extends patterns involving multiplication
3, 8, 13, 18, 22, 28, …. "Start at 3 and add 5 each time. 18 + 5 = 23, so 22 should be 23." 32, 28, ★, 20, 16, 12, 8, …. "Start at 32 and subtract 4 each time. 28 − 4 = ★, so ★ is 24."	"85, 75, 65, 55, …. I started with my house number and took away 10 each time."	"If I save 2 quarters a day, when will I have 10 quarters? 2, 4, 6, 8, 10 I will have 10 quarters after 5 days."	 <table><tr><td>Input</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>Output</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td></tr></table> "Each input number is multiplied by 2."

Observations/Documentation

Activity 9 Assessment
Consolidation

Identifying Equivalent Expressions

Models expressions concretely to determine equivalence	Use number relationships or mental math strategies to determine equivalence	Uses equal sign as balance (left side equals right side) and not equal sign as imbalance	Records an equation with an unknown to match a given situation
2 x 8 / 8 / 8 / ↓ / 4 / 4 / 4 / 4 **4 x 4** / 4 / 4 / 4 / 4 "I could trade rods for other rods to make both models look the same. So, 2 × 8 and 4 × 4 are equivalent."	$9 + 7$ and $42 - 27$ "9 + 7: take 1 from 9 and give it to 7 to make 8 + 8, or 16. 42 − 27: add 3 to each number to make 45 − 30, or 15. Since 15 doesn't equal 16, the expressions are not equivalent."	$2 \times 8 = 4 \times 4$ $9 + 7 \neq 42 - 27$ "The equal sign means that the expressions on both sides are worth the same amount."	"I started with 12 stickers. My friend gave me some more. Now I have 21 stickers. $12 + \blacksquare = 21$ I used a box to represent the unknown, but I could have used a different shape."
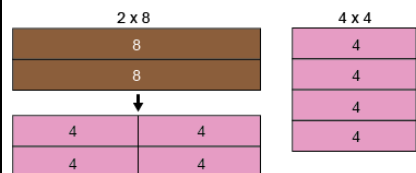
Observations/Documentation