

Topic 1 | Lesson 1-2 | Transformations of Functions

Pacing: 2 Days / Block: 1 Day

LESSON OBJECTIVE(S)	ESSENTIAL UNDERSTANDING
Students will be able to: Graph a transformed function by identifying the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k. Write an equation of a transformed function from a graph. Relate the domain of a function to its graph and the real-world situation it describes.	A function of the form $f(x) = a \cdot f[b(x - h)] + k$ is transformed by changing the values of a, b, h, or k. Changing the value of h or k results in a horizontal or vertical translation, changing the sign of a or b results in a reflection across one of the axes, and changing the value of a or b results in a horizontal or vertical stretch or compression.
NEW VOCABULARY	

Teaching the Lesson

STEP 1: EXPLORE	
Explore & Reason	Teacher will demonstrate each example. The students will then complete the TRY IT for each example. Once completed, students can discuss their solutions with each other.
STEP 2: UNDERSTAND & APPLY	
Example 1: Translate a Function	Teacher will demonstrate each example. The students will then complete the TRY IT for each example. Once completed, students can discuss their solutions with each other.
Example 2: Reflect a Function Across the x - or y -Axis Support for English Language Learners	Teacher will demonstrate each example. The students will then complete the TRY IT for each example. Once completed, students can discuss their solutions with each other.

Example 3: Understand Stretches and Compressions Support for Struggling Students	Teacher will demonstrate each example. The students will then complete the TRY IT for each example. Once completed, students can discuss their solutions with each other.
Example 4: Graph a Combination of Transformations	Teacher will demonstrate each example. The students will then complete the TRY IT for each example. Once completed, students can discuss their solutions with each other.
Example 5: Identify Transformations From an Equation	Teacher will demonstrate each example. The students will then complete the TRY IT for each example. Once completed, students can discuss their solutions with each other.
Example 6: Write an Equation From a Graph Support to Extend Student Thinking	Teacher will demonstrate each example. The students will then complete the TRY IT for each example. Once completed, students can discuss their solutions with each other.
Concept Summary Do You UNDERSTAND? and Do You KNOW HOW?	Teacher will demonstrate each example. The students will then complete the TRY IT for each example. Once completed, students can discuss their solutions with each other.
STEP 3: PRACTICE AND PROBLEM SOLVING	
Practice and Problem Solving	Students will complete the 1-2 Additional Practice MathXL
STEP 4: ASSESS & DIFFERENTIATE	
Lesson Quiz	Students will complete the 1-2 Lesson Quiz for BELL WORK the next class period.
Differentiated Resources Library • Reteach to Build Understanding • Mathematical Literacy and Vocabulary • Additional Practice • Enrichment • Video Tutorials	SavvasRealize.com Teacher Resources Download